ORDER NO. VSD9209M625

Service Manual

Panasonic VHS
Professional/Industrial Video

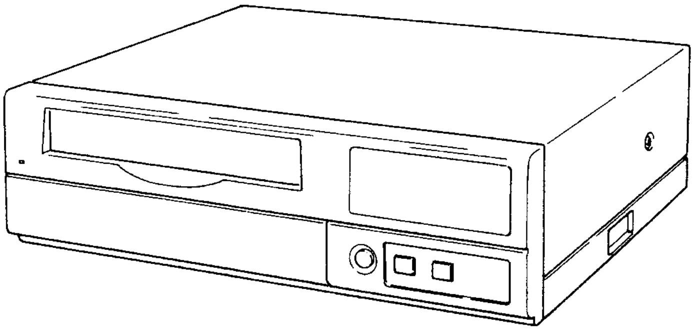
VHS Time Lapse Video Cassette Recorder

AG-6040E

Rack Mounting Adapter

AG-M670P

- Sec. 1 Operating Instructions
- Sec. 2 Disassembly Procedures
- Sec. 3 Maintenance
- Sec. 4 Mechanical Adjustment
- Sec. 5 Electrical Adjustment
- Sec. 6 Block Diagrams
- Sec. 7 Schematic Diagram & Circuit Board Diagrams
- Sec. 8 Exploded Views & Replacement Parts List
- Sec. 9 AG-M670P



Panasonic

SPECIFICATIONS

ITEM		SPECIFICATIONS
Power		Source AC220 to 240 V, 50 / 60 Hz Consumption : Approx. 30W
Television Format		CCIR Standard (625 lines, 50 fields) PAL colour signal
Tape Format		VHS tape
Tape Speed		23.39 mm/s (3H mode)
Recording Time		3 / L12 / L24 / 24 / 48 / 72 / 84 / 120 / 180 / 240 / 480 hours and 1-shot mode
FF/Rew Time		Less than 3 min. with NV-E180
Video	Head	4 rotary heads, helical scanning system (49μm - 35μm) × 2
	Luminance	FM azimuth recording
	Colour signal	converted subcarrier shift recording
	Input Level	LINE IN (BNC): 1.0Vp-p 75Ω unbalanced
	Output level	LINE OUT (BNC): 1.0Vp-p 75Ω unbalanced
	S/N Ratio	B/W; 45dB (3H mode) Colour; 45dB (3H mode)
	Horizontal Resolution	B/W; 320 lines Colour; 240 lines
Standard Accessories		Power Code

ITEM		SPECIFICATIONS
Audio	Head	Normal Audio / Control: 1 stationary head
	Track	1 track
	Input level	LINE IN (PHONO): -10dBv 47KΩ unbalanced MIC IN (M3): -60dBv 600Ω to 4.7KΩ unbalanced
	Output level	LINE OUT (PHONO): -8dBv 600Ω unbalanced
	S/N Ratio	43dB (3H mode)
	Frequency response	50Hz - 10KHz (3H mode)
Operating Temperature		41°F to 104°F (5°C to 40°C)
Operating Humidity		35% to 80%
Dimensions		380(W) × 112(H) × 340(D) mm
Weight		16.5 lbs. (7.5 kg)
Optional Accessories		RS-232C Interface Adaptor : AG-IA670 Frame Switcher : WJ-FS10A Remote Controller : AG-A67 Rack-Mounting Adaptor : AG-M670

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

INTRODUCTION

This Service Manual contains all the thechnical information which will allow service personnel to understand and service the Panasonic VHS Time Lapse video cassette recorder model AG-AG-6040E.
This model is reliable and economical time lapse video cassette recorder for both Video logging and observation. In addition to L12, 24, L24, 48, 72, 84, 120, 180, 240, 480-hours and 1-shot mode time lapse recording which produces a compatible VHS format tape. This new model also includes 3-hours standard play VHS mode.

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SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads connectors, control shafts,etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M ohm and 5.2 M ohm.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

LEAKAGE CURRENT HOT CHECK
(See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15uF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

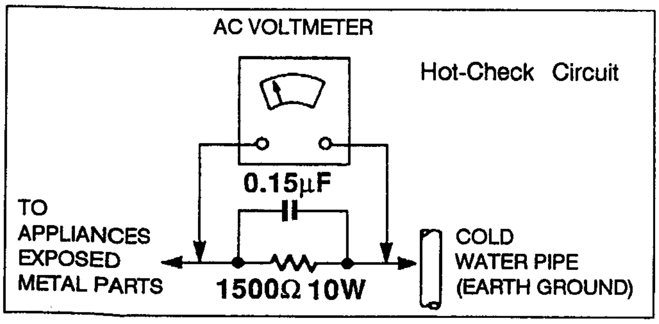
AC VOLTMETER
Hot-Check Circuit
0.15µF
TO APPLIANCES EXPOSED METAL PARTS
1500Ω 10W
COLD WATER PIPE (EARTH GROUND)

Figure 1

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as anti-static can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package untilimmediately before you are ready to install it. (Most replacementES devices are packaged with leads eletcrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no. power is applied to the chassis or circuit, and observe all otner asfety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

Section 1

OPERATING INSTRUCTIONS

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Features

Highly reliable IQ (intelligent quest) mechanism

■ 2 reel motors
Each of the two reels for taking up and advancing the tape has its own motor.

■ New brush-less motors
Newly developed and extremely durable brush-less motors are used for the direct drive (DD) motors.

■ Large-diameter impedance rollers (model AG-6730 only)
These large-diameter rollers made of pure brass have a large mass to keep the tape tension constant.

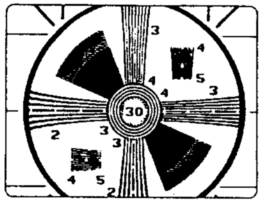
■ 16-bit digital servo system
This controls the tape transport system to a high degree of accuracy and stabilizes tape transport. It improves the recording and playback accuracy and enhances the picture quality overall.

S-VHS system with high picture quality

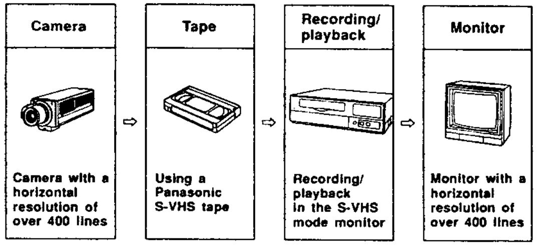
(model AG-6730 only)

The adoption of the S-VHS system enables high-definition pictures with a horizontal resolution of over 400 lines to be achieved.

Horizontal resolution of 400 lines


3
4
4
5
4
3
30
2
3
3
4
5
2

■ Conditions for achieving a horizontal resolution of over 400 lines


Camera
Tape
Recording/ playback
Monitor
Camera with a horizontal resolution of over 400 lines
Using a Panasonic S-VHS tape
Recording/ playback in the S-VHS mode monitor
Monitor with a horizontal resolution of over 400 lines

Multiple-function recording modes

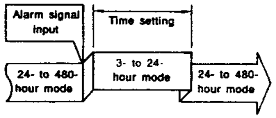
■ Wide variety of recording time modes enabling long-duration recording
- 3-, L12-, L24-, 24-, 48-, 72-, 84-, 120-, 180-, 240- and 480-hour recording modes
- 1-shot recording mode

■ Internal timer recording modes for achieving the automation and labour-saving of monitoring functions

■ External timer recording modes for even more reliable operation

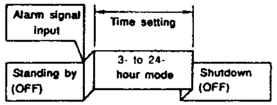
■ Alarm recording mode which, when an alarm signal is input, switches the VTR to an hour mode enabling high-fidelity pictures to be recorded

Coupled to emergency bell and alarm
- **Corners where a cash dispenser or automatic teller machine is installed**
- **Convenience stores, etc.**


Alarm signal input
Time setting
24- to 480-hour mode
3- to 24-hour mode
24- to 480-hour mode

■ Sensor recording mode which starts recording when an alarm signal is input even when the VTR is shut down or when the power is OFF (emergency recording)

- **Sensor recording is possible even when the VTR is standing by in the internal timer recording mode.**


Alarm signal input
Time setting
Standing by (OFF)
3- to 24-hour mode
Shutdown (OFF)

(it is also possible to prevent the time mode from being changed during alarm recording or sensor recording.)

Other Features

■ The cleaning roller automatically cleans the head cylinder each time a tape is loaded.

■ When the optional RS-232C interface adaptor AG-IA670 is mounted, a personal computer can be used to control the VTR.
Also, VITC time codes can be recorded (see page 1-32).

Controls and Their Functions

Front Panel

❶ **VTR Lamp**
This lights when the power is turned on.

❷ **Cassette Holder** (see page 1-6)

❸ **Display Section** (see page 1-4)

❹ **EJECT Button** (see page 1-6)

❺ **REC REVIEW Button** (see page 1-7)
When this is pressed while recording is in progress, the recording can be monitored.

❻ **REC Button** (see page 1-8)

Sub Panel

❼ **VTR Button**

For Swedish and Danish Customers

- Aven om denna omkopplare är i "OFF"-läge, gar fortfarande en del av apparaten nätspänning.
- Selv om denne omskifter er i "OFF" stilling, tiløres en del af apparatet stadig strøm.

❽ **TRACKING Controls** (see page 1-14)
Used to adjust the tracking.

❾ **REC MODE Button** (see page 1-7)
Used to select the recording mode.

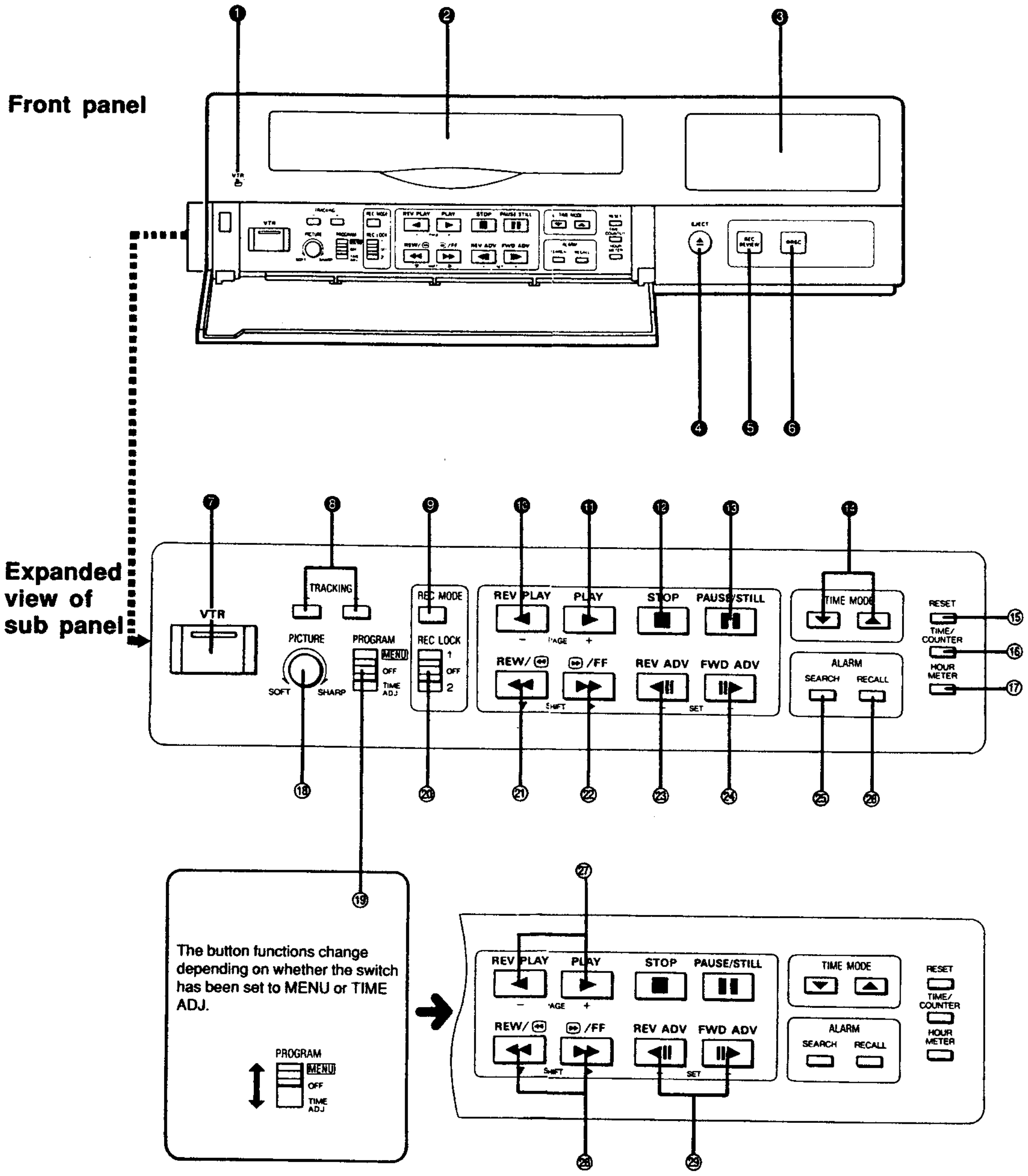
❿ **REV PLAY Button** (see page 1-14)

⓫ **PLAY Button** (see page 1-14)

⓬ **STOP Button** (see page 1-6)

⓭ **PAUSE/STILL Button** (see page 1-6)
Used for temporarily stopping recording or for still-picture playback.

⓮ **TIME MODE Buttons** (see page 1-7)
Used to select the time mode.


Front panel
1
2
3
VTR
EJECT
4
5
6
Expanded view of sub panel
7
8
9
10
11
12
13
14
VTR
TRACKING
PICTURE
SOFT
SHARP
PROGRAM
MENU
OFF
TIME ADJ
REC MODE
REC LOCK
1
OFF
2
REV PLAY
PLAY
STOP
PAUSE/STILL
− PAGE +
REW/⏪
⏩/FF
REV ADV
FWD ADV
SHIFT
SET
TIME MODE
ALARM
SEARCH
RECALL
RESET
TIME/COUNTER
HOUR METER
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

The button functions change depending on whether the switch has been set to MENU or TIME ADJ.

Sub Panel

⑮ **RESET Button** (see page 1-7, 1-10, 1-20)
Used to reset the tape counter.

⑯ **TIME/COUNTER Display Selector Button** (see page 1-7)
Used to switch between the time display and tape counter display.

⑰ **HOUR METER Button**
Press this to display the total time that the VTR has been used (the cylinder has turned).

⑱ **PICTURE Control** (see page 1-14)
Used to adjust the playback picture quality.

⑲ **PROGRAM Switch** (see page 1-7, 1-16, 1-17)
Used to display the menus and set the time/date.

⑳ **REC LOCK Switch** (see page 1-7)
Used to set the recording lock mode.

㉑ **REW Button** (see page 1-6, 1-15)

㉒ **FF Button** (see page 1-6, 1-15)

㉓ **FIELD ADV (REV) Button**
(see page 1-6)

㉔ **FIELD ADV (FWD) Button**
(see page 1-6)

㉕ **ALARM SEARCH Button**
(see page 1-15)
Used to set the alarm search function.

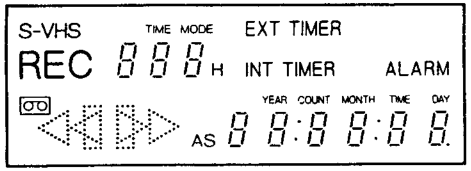
㉖ **ALARM RECALL Button**
(see page 1-10)
Used to display the alarm memory data on the monitor screen.

㉗ **PAGE Buttons** (see page 1-17)
Used to move the menu screen up or down by one page.

㉘ **SHIFT Buttons** (see page 1-17)
Used to select items on the menu screen.

㉙ **SET Buttons** (see page 1-17)
Used to select the setting value.

Description of Displays



Various information relating to the VTR appears on the large-sized display on the front panel.

S-VHS	Appears during playback/recording in the S-VHS mode. (Model AG-6730 only)
REC	Lights up during recording.
TIME MODE 8 8 8 H	Indicates the hour mode.
EXT TIMER	Indicates the recording mode. No display: Regular mode EXTERNAL TIMER: External timer recording mode INTERNAL TIMER: Internal timer recording mode (when this mode is selected, the power is turned off).
ALARM	Appears when the alarm recording mode is set. It appears when "MODE" on menu screen 4 is set to any of the options except "OFF." (See page 1-21)
📼	Appears when a cassette is inserted. After the recording review, this flashes when an error occurs. (See page 1-31)
◁◁ ▯▯ ▷▷	Indicates the VTR's operating mode. ▷ : Playback ◁ : Reverse playback REC ▷ : Recording, monitoring of recording REC ▯▯ : Recording pause ▯▯ : Still-picture, frame advance ▷▷ : Fast forward, search forward ◁◁ : Rewind, search reverse
AS	Appears when the alarm search mode is established. (See page 1-15)
8 8:8 8:8 8	Indicates the time/date or tape counter value.
E - 2	Indicates an error code when an error occurs. (See page 1-31)

Operating Precautions

Operating precautions

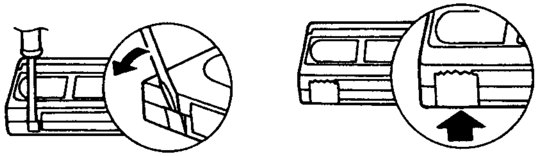
- If the PAUSE/STILL button is pressed during recording in any time mode from 3H to L24H, the tape will run in the reverse direction for about 3 seconds before stopping.
  When the same button is pressed again, the tape will run for about 3 seconds before recording is resumed.
- Time lapse recording is performed in the 24H or longer recording time mode. By omitting frames while recording the pictures, it is possible to record over long periods of time. However, since the picture is not continuous, the sound cannot be recorded.
- When the recording time mode has been set to any position other than "OFF" on menu screen 2, it cannot be changed using the TIME MODE button on the sub panel during recording. When it has been set to "OFF," the time mode can be changed even during recording using the TIME MODE button on the sub panel.
- When the power is restored after a power failure and power is again supplied to the VTR, the power loss memory screen shown below will appear on the monitor screen for 15 seconds.
  While the power loss memory display appears on the monitor screen, menu screen and time settings cannot be conducted.

```
POWER LOSS    05 31-10-92
                   17:42
```

- The TIME MODE button does not work during alarm recording.
- When the REC button is pressed during still-picture playback, the VTR is set to the recording pause mode, and the E-E picture appears on the monitor.
- If frame advance and frame reverse operations are repeated many times in the same place on the tape, noise may appear. It will disappear when frame advance or frame reverse is continued.

Accidental erasure prevention tab

- Valuable recordings can be protected from accidental erasure by breaking out the tab on the cassette.
- To re-record over a tape in a cassette whose tab has been broken out, stick an adhesive tape over the tab opening.



Break out the tab in the direction of the arrow.

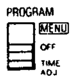
Operation Map

The sequence of steps to be taken from connecting the VTR to playback is described on these pages.

Connections/preparations
(see page 1-27)

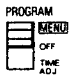
- Connect the cameras, monitors, sequential switcher, alarm switch, sensor switch, buzzer, etc. to the VTR as required.
- Turn on the power to the VTR and to the units which have been connected to it.
- Check that a clear picture from the camera appears on the TV monitor.
- Insert the cassette tape.

Time & date setting
(see page 1-16)



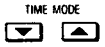
Set the time and date.

Menu setting
(see page 1-17)



Set the menus.
(Operation is possible only when in the eject or stop mode and when the recording lock switch is OFF.)

Time mode setting
(see page 1-7)



The mode can be set when REC T-MODE on menu screen 2 is set to "OFF."

Recording mode setting
(see page 1-7)

Select one of the following 3 modes.
- Regular mode
- External timer mode
- Internal timer mode

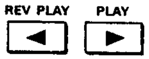
Recording
(see page 1-8)

Recording starts when this is pressed.

Recording check
(see page 1-7)

The material just recorded can be checked while the recording is actually in progress.

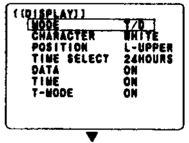
Playback
(see page 1-14)



- Playback
- Reverse playback
- Search forward
- Search reverse
- 1-frame forward
- 1-frame reverse
- Still-picture playback

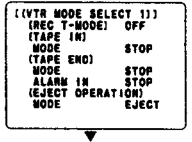
(see page 1-6)

Menu screens



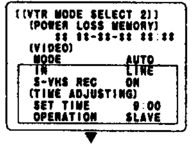
```
((DISPLAY))
  MODE          T/D
  CHARACTER     WHITE
  POSITION      L-UPPER
  TIME SELECT   24HOURS
  DATA          ON
  TIME          ON
  T-MODE        ON
```

Menu screen 1
Menu display setting
• ☐ is no indication for AG-6040.



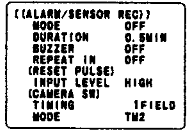
```
((VTR MODE SELECT 1))
  (REC T-MODE)   OFF
  (TAPE IN)
   MODE          STOP
  (TAPE END)
   MODE          STOP
   ALARM IN      STOP
  (EJECT OPERATION)
   MODE          EJECT
```

Menu screen 2
VTR mode setting 1



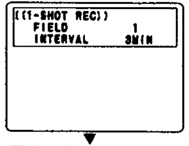
```
((VTR MODE SELECT 2))
  (POWER LOSS MEMORY)
      $$ $$-$$-$$ $$:$$
  (VIDEO)
   MODE          AUTO
   IN            LINE
   S-VHS REC     ON
  (TIME ADJUSTING)
   SET TIME       9:00
   OPERATION     SLAVE
```

Menu screen 3
VTR mode setting 2
• ☐ is no indication for AG-6040.



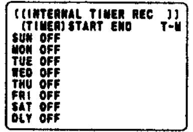
```
((ALARM/SENSOR REC))
   MODE          OFF
   DURATION      0.5MIN
   BUZZER        OFF
   REPEAT IN     OFF
  (RESET PULSE)
   INPUT LEVEL   HIGH
  (CAMERA SW)
   TIMING         1FIELD
   MODE          TM2
```

Menu screen 4
Alarm recording mode setting



```
((1-SHOT REC))
   FIELD          1
   INTERVAL      3MIN
```

Menu screen 5
1-shot recording mode setting
• ☐ is no indication for AG-6040.

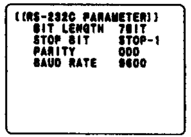


```
((INTERNAL TIMER REC  ))
 (TIMER)START END     T-M
SUN OFF
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

Menu screen 6
Internal timer recording mode setting

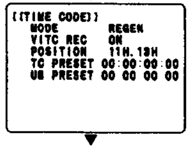
(To return to menu screen 1)

- **The following screens will also appear when the optional RS-232C interface adaptor AG-IA670 is mounted.**



```
((RS-232C PARAMETER))
   BIT LENGTH  7BIT
   STOP BIT    STOP-1
   PARITY      ODD
   BAUD RATE   9600
```

Menu screen 7
RS-232C parameter setting

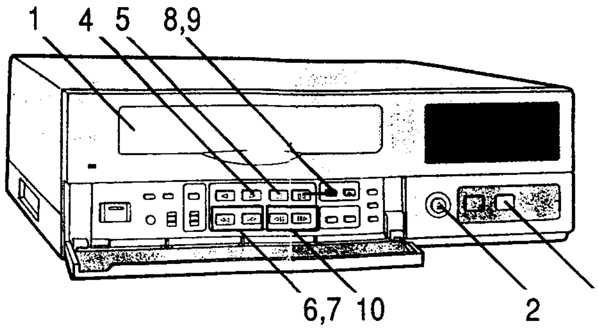


```
((TIME CODE))
   MODE          REGEN
   VITC REC      ON
   POSITION      11H.13H
   TC PRESET 00:00:00:00
   UB PRESET 00 00 00 00
```

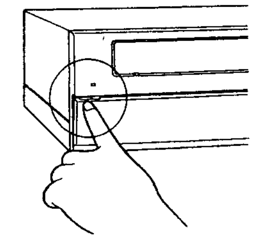
Menu screen 8
Time code setting

(To return to menu screen 1)

Basic First Steps For Operation



■ Opening the sub panel

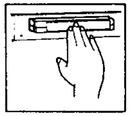


Press this corner gently with your finger.

When starting to use the VTR, make sure that you have acquainted yourself with at least these basic operations.

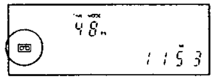
■ Installing the cassette

1



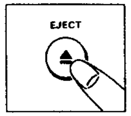
Press the middle part of the cassette.

Do not force it in!



■ Ejecting the cassette

2

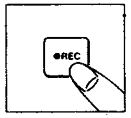


Press this button.

(No operation results unless the control is pressed down firmly.)

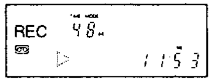
■ Recording

3



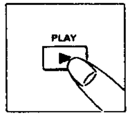
Press this button.

[See Note 1]

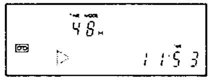


■ Playback

4

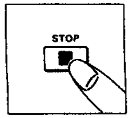


Press this button.



■ Stop

5

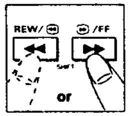


Press this button.

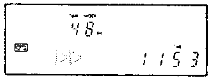
This will stop all tape travel.

■ Fast forwarding/rewinding

6

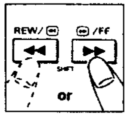


Press one of these buttons when the tape is stopped.



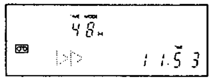
■ Search forward/search reverse

7



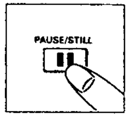
Keep one of these buttons depressed during playback.

[See Note 2]



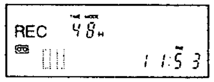
■ Temporarily suspending recording

8



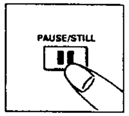
Press this button during recording.

[See Note 3]



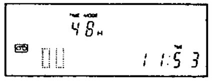
■ Still-picture playback

9



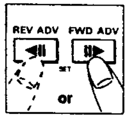
Press this button during playback.

[See Note 3]



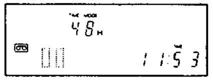
■ Frame advance/reverse playback

10



Press one of these buttons during still-picture playback.

[See Note 3]



NOTES

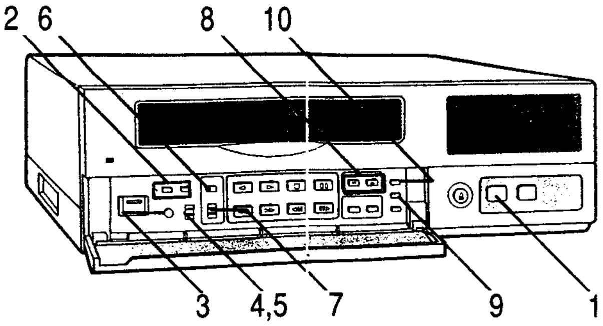
[Note 1]
If the cassette's accidental erasure prevention tab is missing, the cassette is ejected. (See page 1-4)

[Note 2]
Continuous search forward or search reverse operations can be initiated by pressing the FF or REW button once if the alarm search mode has been established.
(See page 1-15)

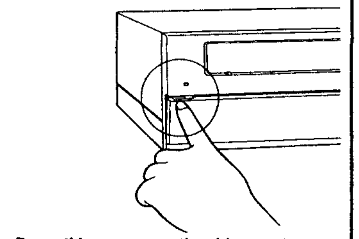
[Note 3]
The pause or still-picture mode gives way to the stop mode when a fixed period of time has elapsed. This is to protect the tape.

[Auto head cleaning function]
Any dirt on the video heads is automatically removed whenever recording or playback is started from the stop mode, whenever the unit is placed in the stop mode from the recording or playback mode so that, as a result, a clear picture is obtained.
Nevertheless, the video heads may become dirty after prolonged use of the VTR, in which case they must be cleaned. The optional (non-abrasive) cassette for head cleaning is recommended.

Basic First Steps For Operation
(Continued)

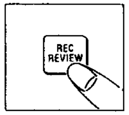


■ Opening the sub panel



Press this corner gently with your finger.

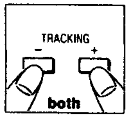
■ Monitoring the recording

1


Press the button during recording.

[See Note 1]

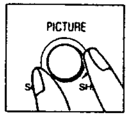
■ Adjusting the tracking

2


Press both buttons together during playback.

If the tracking still cannot be adjusted, press the "+" or "–" button separately. (See page 1-14)

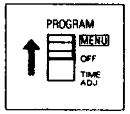
■ Adjusting the picture quality

3


Turn this control during playback.

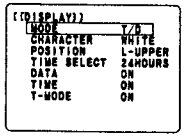
(See page 1-14)

■ Bringing up the menu screen

4


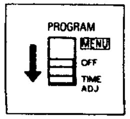
Set the switch to MENU when the tape has stopped or when it has been ejected.

• ▭ is no indication for AG-6040.



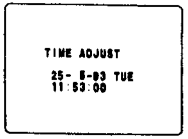
```
[[DISPLAY]]
 MODE          T/D
 CHARACTER     WHITE
 POSITION      L-UPPER
 TIME SELECT   24HOURS
 DATA          ON
 TIME          ON
 T-MODE        ON
```

■ Bringing up the time setting display

5


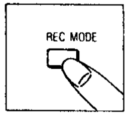
Set the switch to TIME SET when the tape has stopped or when it has been ejected.

• When the switch is set to this position during recording, the time setting screen will be recorded.



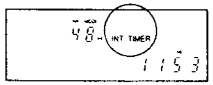
```
TIME ADJUST

25- 5-93 TUE
11:53:00
```

■ Selecting the recording mode

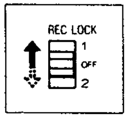
6


Press this button and select the mode before proceeding with the recording.

[See Note 2]



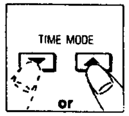
■ Locking the recording

7


Set the switch to "1" or "2" during recording.

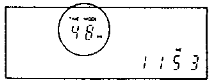
[See Note 3]

■ Selecting the time mode

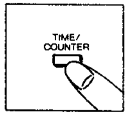
8


Press this button before (or during) recording or playback.

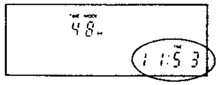
[See Note 4]



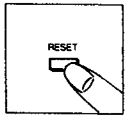
■ Switching between the time and tape counter display

9


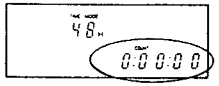
The display is switched each time this button is pressed.



■ Resetting the tape counter

10


Press this button while the counter value is displayed.



NOTES

[Note 1]
The pictures immediately before the REC REVIEW button was pressed during recording are partially played back, and then operation returns to the recording mode.
(It takes about 3 seconds for the playback picture to appear.)
The cassette mark (▭) on the display flashes if it was not possible for the proper video level to be obtained after the recording review operation due to dirt on the heads or deterioration of the tape. (See page 1-31)

- It is also possible to set the function which automatically carries out the recording review each time the recording starts. (See page 1-30)

[Note 2]
The recording mode is set to the EXTERNAL TIMER, INTERNAL TIMER and NO DISPLAY in sequence each time the REC MODE button is pressed.
When the internal timer mode is established, the power is set OFF.
(See page 1-12)

[Note 3]
When recording is locked, the regular operations can no longer be performed.

1:	Recording review only.
OFF:	Regular operations can be performed.
2:	Recording review, eject only.

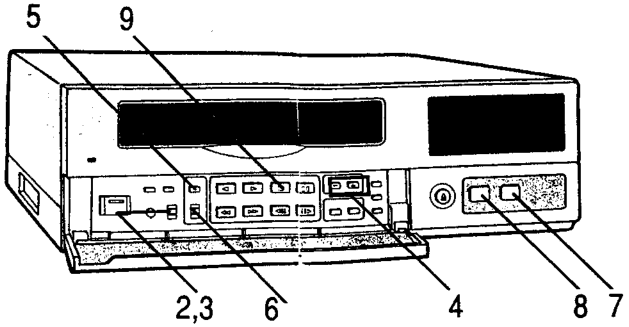
(The HOUR METER button always can be operated.)

[Note 4]
The time (hour) modes are as follows.

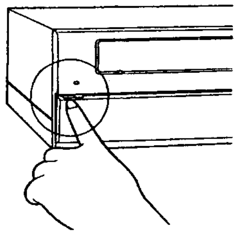
3H mode:	Standard mode
L12/L24H mode:	Continuous low-speed (linear slow) mode
24~480H mode:	Intermittent (time lapse) mode
000H mode:	1-SHOT mode

Refer to page 1-19 for more details on the recording time modes.

Recording



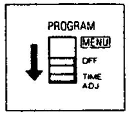
■ Opening the sub panel



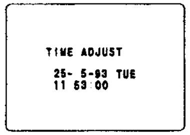
Press this corner gently with your finger.

The sequence of steps to be taken from the start of recording to its completion is described on these pages.

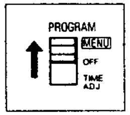
1 **■ Connect the equipment and prepare the units for operation.** (See page 1-27)
■ Turn on the power.
■ Install a cassette with its accidental erasure prevention tab intact. (See page 1-4)
[See Note 1]

2 

Adjust the time and date.
(See page 1-16)
[See Notes 2, 3]

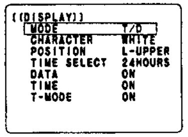


TIME ADJUST
25- 5-93 TUE
11 53 00

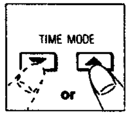
3 

Set the menu.
(See page 1-17)
[See Note 3]

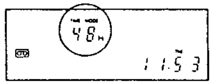
•▭is no indication for AG-6040.

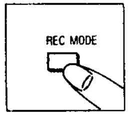


((DISPLAY))
MODE T/D
CHARACTER WHITE
POSITION L-UPPER
TIME SELECT 24HOURS
DATA ON
TIME ON
T-MODE ON

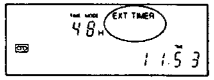
4 

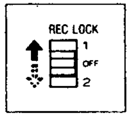
Press these buttons to set the hour mode.
[See Note 4]



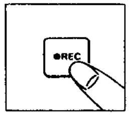
5 

Press this button to set the recording mode.
[See Note 5]

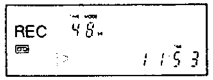


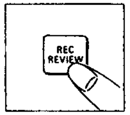
6 

Set the switch to "1" or "2" to lock the recording.

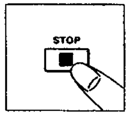
7 

Press this button to start the recording.



8 

The recording can be monitored if this button is pressed while the recording is in progress.

9 

Press this button to stop the recording.
[See Note 6]

■ Recommended tapes

This time lapse recorder has been designed to yield the high degree of reliability which is required in such applications as monitoring, security and observation. In order to assure this reliability in recording, it is recommended that the following Panasonic tapes be used.
VHS tapes: NV-E30/E60/E90/E120/E180 series
S-VHS tapes: NV-SE30EM/SE60EM/SE180EM series

NOTES

[Note 1]
The automatic recording function can be set on menu screen 2.
(See page 1-19)

[Note 2]
The automatic time setting function can be set on menu screen 3. (Model AG-6730 only)
(See page 1-20)

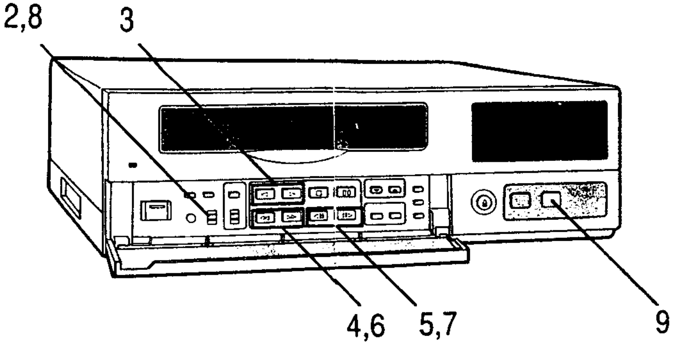
[Note 3]
Upon completion of the time and menu setting, be sure to set the PROGRAM switch to "OFF."

[Note 4]
When "REC T-MODE" on menu screen 2 is at any setting other than "OFF," the time (hour) mode will be set to the setting which was set by "REC T-MODE."
(See page 1-19)

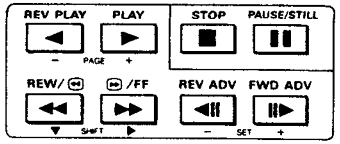
[Note 5]
When the "internal timer recording" mode is selected, the power will be turned off.
(See page 1-12)

[Note 6]
If the recording lock switch has been set to a position other than OFF, first return it to the OFF position, and then press the stop button.

Alarm Recording



[Menu setting buttons]

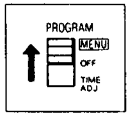


PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

When there is an alarm input during time lapse recording, the alarm recording function changes the time mode to a setting which enables recording to be conducted clearly so that the scene of the emergency will be recorded faithfully.

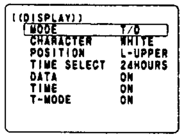
1 **Complete steps 1 to 4 on page 1-8.**

---

2 

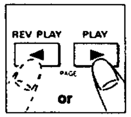
Set this switch to "MENU."

• ▭ is no indication for AG-6040.

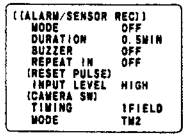


```
[(DISPLAY)]
  MODE          T/D
  CHARACTER     WHITE
  POSITION      L-UPPER
  TIME SELECT   24HOURS
  DATA          ON
  TIME          ON
  T-MODE        ON
```

---

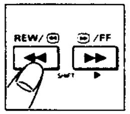
3 

Press one of these buttons to display menu screen 4.

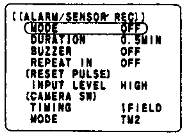


```
[(ALARM/SENSOR REC)]
  MODE          OFF
  DURATION      0.5MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING        1FIELD
  MODE          TM2
```

---

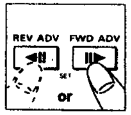
4 

Press this button.



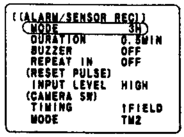
```
[(ALARM/SENSOR REC)]
  MODE          OFF
  DURATION      0.5MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING        1FIELD
  MODE          TM2
```

---

5 

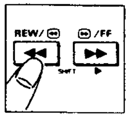
Press one of these buttons to select the recording time mode for alarm recording.

[See Note 1]

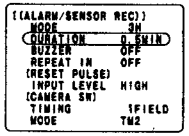


```
[(ALARM/SENSOR REC)]
  MODE          3H
  DURATION      0.5MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING        1FIELD
  MODE          TM2
```

---

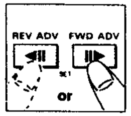
6 

Press this button.



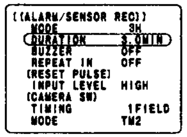
```
[(ALARM/SENSOR REC)]
  MODE          3H
  DURATION      0.5MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING        1FIELD
  MODE          TM2
```

---

7 

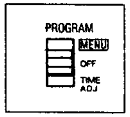
Press one of these buttons to select the recording duration.

[See Note 2]



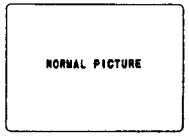
```
[(ALARM/SENSOR REC)]
  MODE          3H
  DURATION      3.0MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING        1FIELD
  MODE          TM2
```

---

8 

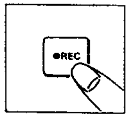
Set this switch to OFF.

[See Note 3]

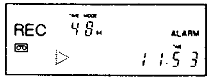


```
NORMAL PICTURE
```

---

9 

Press this button.



---

10 **Recording now commences.**
Refer to page 1-8 for details on the recording procedure.
(Continued overleaf)

NOTES

[Note 1]

- Set to OFF when alarm recording is not going to be performed.
- "ALARM" appears on the display when "MODE" is set to any position other than "OFF."
- The recording time setting options are listed below:
  3-, L12-, L24-, 24-hour, NO CHANGE
  (See page 1-21)

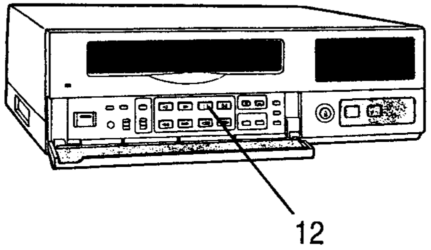
[Note 2]
The "recording duration" is the length of time during which alarm recording is executed. (See page 1-21)

[Note 3]
The settings made on the menu screens are entered when the PROGRAM switch has been set to "OFF."

[Other notes]
Besides the settings mentioned here, the following can also be set on menu screen 4.

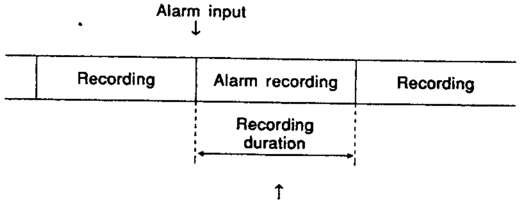
- Buzzer ON/OFF during alarm recording (BUZZER)
- Repeat-in function setting (REPEAT IN)
- Alarm reset pulse level selection (RESET PULSE)
- Camera switchover timing (CAMERA SW)
  (See page 1-21)

Alarm Recording
(Continued)



11

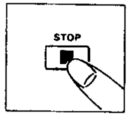
■ The alarm recording mode is established when there is an alarm input.


Alarm input
↓
Recording
Alarm recording
Recording
Recording duration
↑

Faithful recording in the time (hour) mode set

- Once an alarm recording is conducted, "alarm" flashes on the display. Pressing the stop button turns off the display.

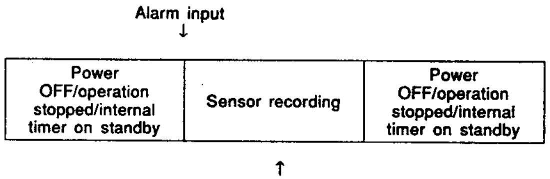
12



Press this button to stop recording.

Sensor (emergency) recording mode

- Even if the power is off or operation has stopped, sensor (emergency) recording is started as soon as there is an alarm input.
- What happens in the sensor recording and the alarm recording mode is the same.
- The sensor recording function does not work when "MODE" on menu screen 4 is set to "OFF."

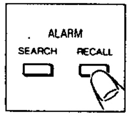

Alarm input
↓
Power OFF/operation stopped/internal timer on standby
Sensor recording
Power OFF/operation stopped/internal timer on standby
↑

Recording is started with the settings made on menu screen 4.

Alarm memory recall function

This function stores in the memory the dates and number of times that alarm recording has been activated.

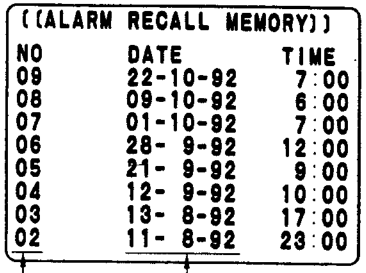
Right side of sub panel


ALARM
SEARCH
RECALL

When this is pressed, the alarm list is displayed.

- Data for the last alarm recordings (up to 8) is stored.
- The alarm count extends up to 99, after which the count returns to 00.
- The memory can be cleared by pressing the RESET button while the alarm recall screen is displayed.
- The display is cleared automatically after 30 seconds have elapsed. It is also cleared by pressing the ALARM RECALL button again.
- As with alarm recording, sensor recording data is also stored in the alarm memory.

Monitor

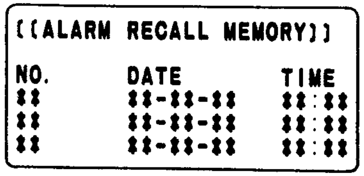


```
[[ALARM RECALL MEMORY]]
NO       DATE        TIME
09     22-10-92      7:00
08     09-10-92      6:00
07     01-10-92      7:00
06     28- 9-92     12:00
05     21- 9-92      9:00
04     12- 9-92     10:00
03     13- 8-92     17:00
02     11- 8-92     23:00
```

Alarm number:
The data on the most recent alarm recordings appears in chronological order with the latest at the top.

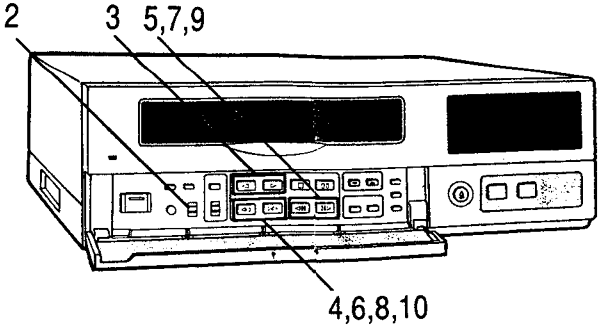
Dates and times of alarm inputs

■ The following appears on the screen when there has been no alarm recording or when the alarm memory has been reset.

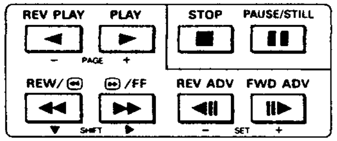


```
[[ALARM RECALL MEMORY]]
NO.      DATE        TIME
**     **-**-**     **:**
**     **-**-**     **:**
**     **-**-**     **:**
```

Internal Timer Recording



[Menu setting buttons]

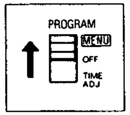


PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

Using the internal timer, recording can be made to start and finish at any time settings.

1 **Complete steps 1 and 2 on page 1-8.**

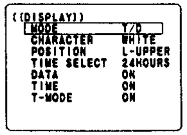
2



Set this switch to "MENU."

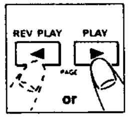
•▭ is no indication for AG-6040.

[See Note 1]

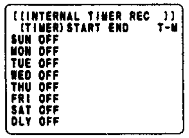


```
((DISPLAY))
  MODE          T/D
  CHARACTER     WHITE
  POSITION      L-UPPER
  TIME SELECT   24HOURS
  DATA          ON
  TIME          ON
  T-MODE        ON
```

3



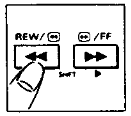
Press one of these buttons to display menu screen 6.



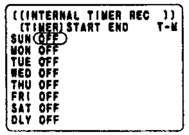
```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN OFF
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

↓ This is the first step for the weekly timer setting.

4

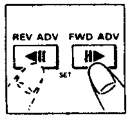


Press this button.



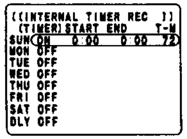
```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN OFF
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

5



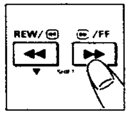
Press one of these buttons to select "ON."

[See Note 2]



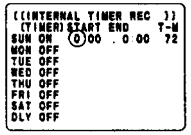
```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON     0:00   0:00  72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

6



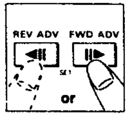
Press this button.

This sets the start time.

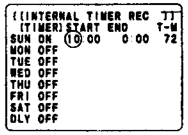


```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON    0:00 . 0:00   72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

7

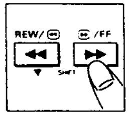


Press one of these buttons to set the "hours" of the start time.

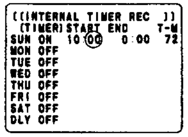


```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON   10:00   0:00   72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

8

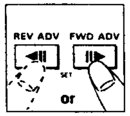


Press this button.

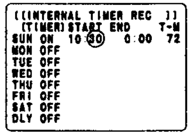


```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON   10:00   0:00   72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

9

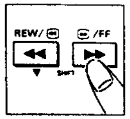


Press one of these buttons to set the "minutes" of the start time.

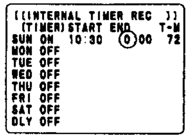


```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON   10:30   0:00   72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

10



Press this button. This sets the end time.



```
((INTERNAL TIMER REC  ))
 (TIMER)START END    T-M
SUN ON   10:30   0:00   72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

↓ (Continued overleaf)

NOTES

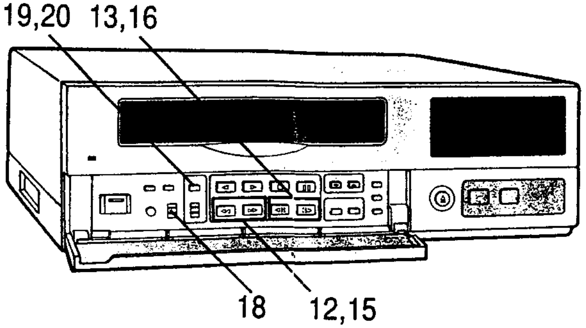
[Note 1]
The menu screen can be displayed only when the VTR is in the stop or eject mode.

[Note 2]
Keep the PROGRAM switch at the "OFF" position if timer recording is not going to be set.

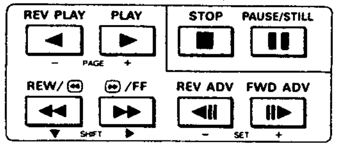
[Other notes]
Be sure to complete the date/time setting stage before setting the internal timer.

Internal Timer Recording

(Continued)



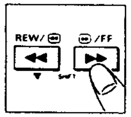
[Menu setting buttons]



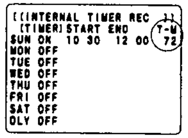
PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

11 **Set the "hours" and "minutes" of the end time in the same way as for the start time (steps 7 to 9).**

12

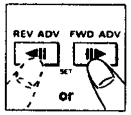


Press this button.

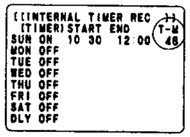


```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END   T-M
SUN OK  10 30  12 00  72
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

13



Press one of these buttons to select the recording hour mode. [See Note 1]



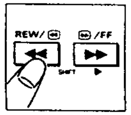
```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END   T-M
SUN ON  10 30  12:00  48
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

14 **Repeat steps 4 to 13 to set the recording start and end times and the recording time mode (in hours) for each day of the week.**

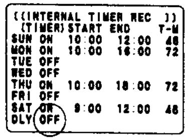
↑ This is the last step for the weekly timer setting. [See Note 2]

↓ This is the first step for the daily timer setting. [See Note 2]

15

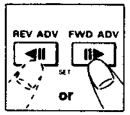


Press this button.



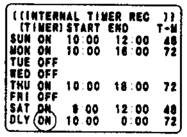
```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END   T-M
SUN ON  10:00  12:00  48
MON ON  10:00  16:00  72
TUE OFF
WED OFF
THU ON  10:00  18:00  72
FRI OFF
SAT ON   9:00  12:00  48
DLY OFF
```

16



Press one of these buttons to select "ON."

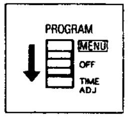
[See Note 3]



```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END   T-M
SUN ON  10:00  12:00  48
MON ON  10:00  16:00  72
TUE OFF
WED OFF
THU ON  10:00  18:00  72
FRI OFF
SAT ON   9:00  12:00  48
DLY ON  10:00   0:00  72
```

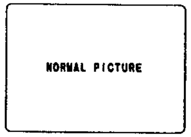
17 Repeat steps 7 to 13 to set the recording start and end times and the recording time mode (in hours) in the same way as for the weekly timer.

18



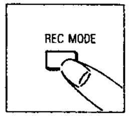
Set this switch to the "OFF" position.

[See Note 4]



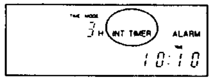
```
NORMAL PICTURE
```

19

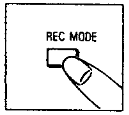


Press this switch to display "INTERNAL TIMER."

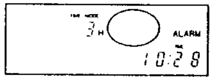
[See Note 5]



20



To release the mode, press this switch and turn off the "INTERNAL TIMER" display.



NOTES

[Note 1]
The daily timer takes priority in terms of the recording time mode (in hours) when daily timer and weekly timer settings overlap the same time zones. (See page 1-22)

[Note 2]
Weekly (day of the week) timer
The timer can be set for recording at different times each day of the week.

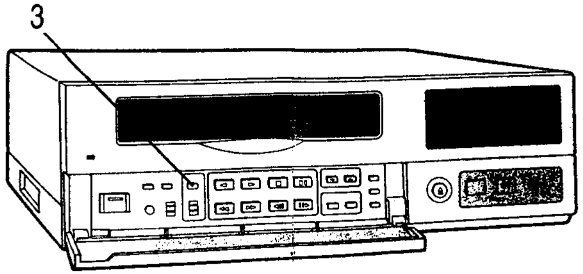
Daily (every day) timer
The timer can be set for recording at the same time every day.

[Note 3]
When the daily timer is not going to be set, press one of the buttons in step 16 and set "OFF."

[Note 4]
The settings made on the menu screen are entered when the PROGRAM switch is returned to the "OFF" position. Once set and entered, the settings are retained semi-permanently.

[Note 5]
When the recording mode is set to "INTERNAL TIMER," the power is switched off. At the set time, recording will start automatically.

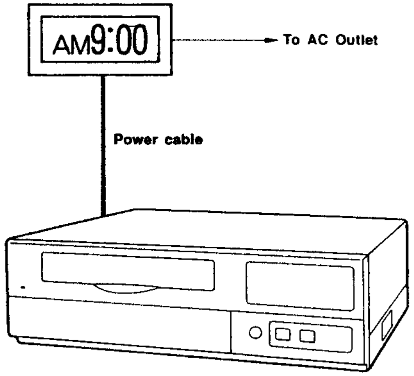
External Timer Recording



By connecting an externa timer to the VTR, the power to the VTR can be switched ON and OFF to perform timer recordings.

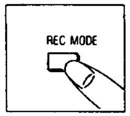
1 **Complete step 1 to 4 on page 1-8.**

2 **Connect the external timer.**



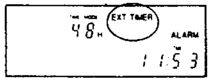
- ■ Leave the VTR's power on until the setting procedure is completed.

3



Press this button to display "EXTERNAL TIMER."

[See Note 1]

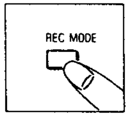


4 **Set the external timer.**

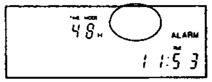
[See Note 2]

5 **Recording starts at the time set by the external timer.**

6



To release the mode, press this button with power supplied to the VTR and clear the "EXTERNAL TIMER" display.



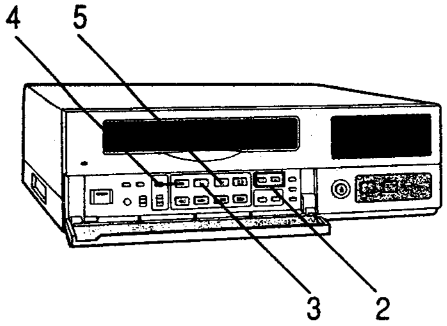
NOTES

[Note 1]
When a cassette has not been installed or when the accidental erasure prevention tab on the cassette installed has been broken out, the buzzer sounds and "EXTERNAL TIMER" flashes.

[Note 2]
For details on how to set the external timer, refer to the operating instructions accompanying the timer.

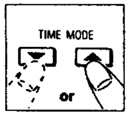
[Other notes]
In the external timer recording mode, sensor recording will not start even with an alarm input if the VTR's main power is OFF.

Playback



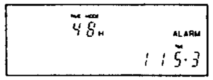
This operation visually displays what has been recorded.

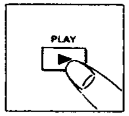
1
- **Complete the connections and ready the units connected for operation.** (See page 1-27)
- **Turn on the power.**
- **Install a prerecorded cassette.**

2 

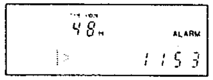
Press one of these buttons to select the time (hour) mode.

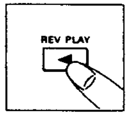
[See the section on the time modes on the right-hand page.]



3 

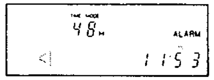
Press this button for regular playback.

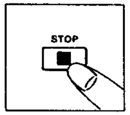


4 

Press this button for reverse playback.

Reverse playback of 1-shot recording is not possible.

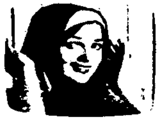


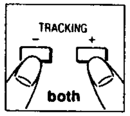
5 

Press this button to stop playback.

Tracking adjustment

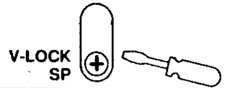
Adjust the tracking if noise similar to that shown below appears on the playback picture.





- This VTR comes with an auto tracking function to obviate the need to adjust the tracking under normal circumstances. However, should noise similar to that shown on the left appear, re-adjust the tracking.
- Press the "+" and "–" buttons at the same time.
  If noise still appears, press the "+" and "–" buttons separately.

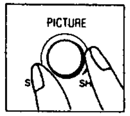
Vertical Lock Adjustment (model AG-6040 only)



If picture jitters vertically in the Still mode, adjust the V-Lock Control on the bottom panel of VTR using the screwdriver.
If the TV Monitor has a vertical hold control, adjust the control together with the V-Lock Control.

Picture quality adjustment

When adjusting the playback picture:



- Turning the control clockwise yields a sharply defined picture.
- Turning the control counterclockwise yields a softly defined picture.

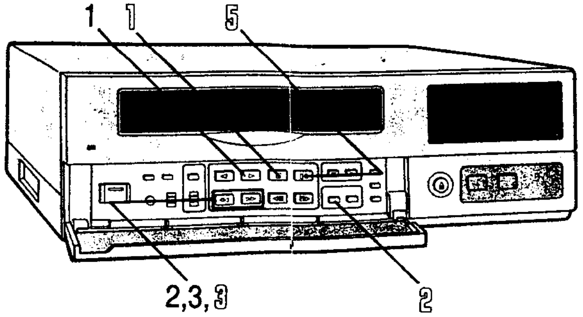
Time modes

- Bear in mind the following points when playing back an intermittently recorded tape in the same time mode.
  - The picture may shake slightly in the lateral direction but this is not indicative of malfunctioning.
  - There may be some slight distortion at the top of the picture but this is not indicative of malfunctioning.
  - The picture may dance in both L12 and L24 modes. This is normal and not indicative of malfunctioning.
  - The sound is not reproduced perfectly. This is normal and not indicative of malfunctioning.
- Still picture
  A clear picture image can be obtained by playing back a recorded tape in the same time mode.
- When a tape recorded in a 12H or longer mode is played back in the 3H mode, it can be played back at quick motion.
- If, when the sound was recorded, the mode in which the sound was recorded differs from the mode in which it is played back, the pitch of the sound will also change.

Other notes

- No sound will be heard during reverse playback.
- Reverse playback is not possible with the tape recorded in the 1-shot recording mode.
- The picture may dance while the tape is being played back in any L (linear slow) mode. This is normal and not indicative of a failure.

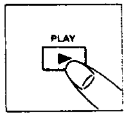
Search Operations



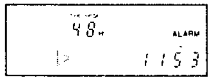
These operations are for initiating search playback and alarm search playback.

■ Search playback (search forward/search reverse)

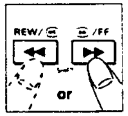
1



Press this button to start playback.


48H
ALARM
11:53

2

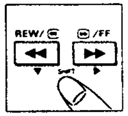


Keep one of these buttons depressed.

[See Note 1]

48H
ALARM
11:53

3


REW/
/FF
SHIFT

Release the button to return to regular playback.

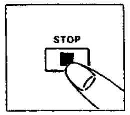
48H
ALARM
11:53

■ To continue the search operation, establish the alarm search mode. (See right-hand page)

- If the fast forward or rewind button is pressed during playback, the search operation is performed continuously.
- When the play button is pressed again, operation returns to regular playback.

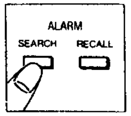
■ Alarm search procedure

1



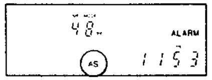
Press this button and set the VTR to the stop mode.

2

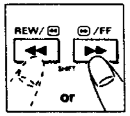

ALARM
SEARCH
RECALL

Press this button to display "AS."

[See Note 2]


48H
ALARM
AS
11:53

3


REW/
/FF
SHIFT
or

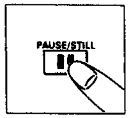
Press one of these buttons to fast forward or rewind the tape.

48H
ALARM
AS
11:53

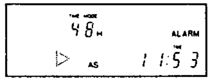
4

■ The first alarm recorded section on the tape is searched in the direction corresponding to the button pressed, and the VTR is set to the still-picture playback mode.
[See Note 3]

5


PAUSE/STILL

Press this button to play back the section.


48H
ALARM
AS
11:53

NOTES

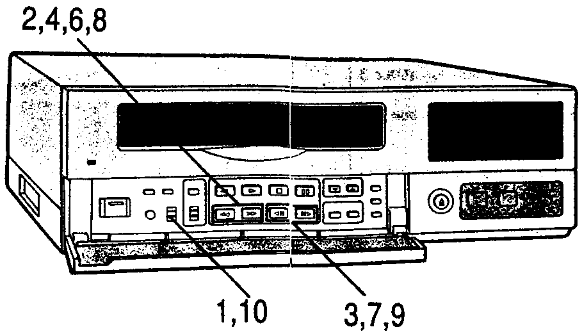
[Note 1]
If the REW button is pressed during search playback, the tape will be played back in the reverse direction at 7 times the regular tape speed; if the FF button is pressed instead, it will be played back in the forward direction at 7 times the regular tape speed.

[Note 2]
To release the alarm search mode, press the ALARM SEARCH button again and clear "AS" from the display.

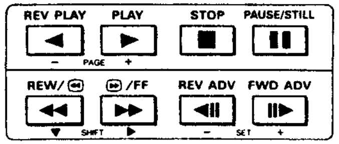
[Note 3]
Only an alarm recorded section which was recorded in the 3H mode can be searched using the alarm search function.

1-10. Time & Date Setting

Time & Date Setting


2,4,6,8
1,10
3,7,9

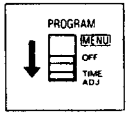
[Time setting buttons]


REV PLAY
PLAY
STOP
PAUSE/STILL
– PAGE +
REW/⏪
⏩/FF
REV ADV
FWD ADV
▼ SHIFT ▶
– SET +

SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

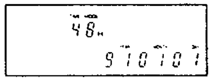
This section describes how the time and date are set.

1

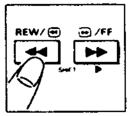

PROGRAM
MENU
OFF
TIME ADJ

Set this switch to "TIME ADJ."

[See Notes 1, 2 and 3]

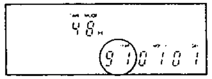


2

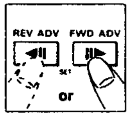

REW/⏪
⏩/FF
SHIFT

Press this button.

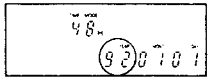
"Year" flashes.



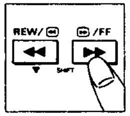
3


REV ADV
FWD ADV
SET
or

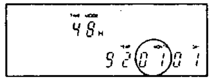
Press one of these buttons to set the number for the year.



4


REW/⏪
⏩/FF
▼ SHIFT

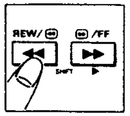
Press this button.



---

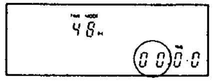
5 **Repeat steps 3 and 4 to set the month and then the day.**

6

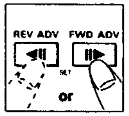

REW/⏪
⏩/FF
SHIFT ▶

Press this button after the date (year/month/day) has been set.

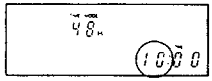
[See Note 4]



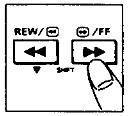
7


REV ADV
FWD ADV
SET
or

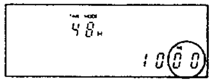
Press one of these buttons to set the "hours."



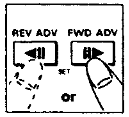
8


REW/⏪
⏩/FF
▼ SHIFT

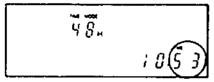
Press this button once.



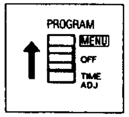
9


REV ADV
FWD ADV
SET
or

Press one of these buttons to set the "minutes."

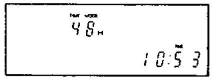


10


PROGRAM
MENU
OFF
TIME ADJ

Set this switch to "OFF."

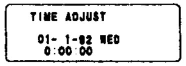
[See Note 5]



NOTES

[Note 1]
If the time is set during recording, the screen on which the time was set will be recorded.

[Note 2]
The screen appears below on the TV monitor.



TIME ADJUST
01- 1-92 WED
0:00:00

[Note 3]
The default display is 01 1 92 (January 1, 1992). The date can be set up to 31 12 07 (December 31, 2007).

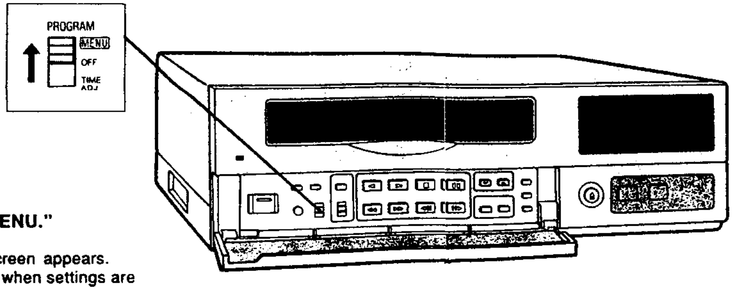
[Note 4]
The default display is 00:00:00. The maximum time which can be displayed is 23:59:59 (although only the hours and minutes actually appear on the display).

[Note 5]
The time starts elapsing from the moment that step 10 is performed. The time can be set accurately if the switch is set to "OFF" as soon as the time signal is heard.

[Other notes]

- The maximum monthly time error is 60 seconds.
- The time and date data will be retained in the event of a power failure provided that it does not last longer than one month (AG-6730) or one week (AG-6040). (For the data to be retained, power must have been supplied for at least 40 hours.)
- Adjustment for leap years is automatic.

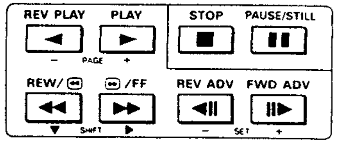
Menu Screens



Set the switch to "MENU."

- The previous setting screen appears.
- Menu screen 1 appears when settings are to be performed for the first time.

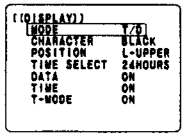
[Menu setting buttons]



PAGE (–) button: Page down
PAGE (+) button: Page up
SHIFT (▼) button: Move to item below
SHIFT (▶) button: Move to item on the right
SET (–) button: Change item (decrement numerical value)
SET (+) button: Change item (increment numerical value)

The VTR's many functions can be set on-screen.

■ Menu screen 1 (screen display settings)

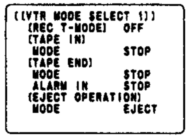


```
((DISPLAY))
  MODE         T/D
  CHARACTER    BLACK
  POSITION     L-UPPER
  TIME SELECT  24HOURS
  DATA         ON
  TIME         ON
  T-MODE       ON
```

The information displayed on the TV monitor is set on this screen.

- ☐ is no indication for AG-6040.

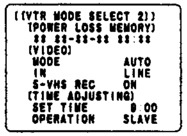
■ Menu screen 2 (VTR mode settings 1)



```
((VTR MODE SELECT 1))
  (REC T-MODE)   OFF
  (TAPE IN)
   MODE          STOP
  (TAPE END)
   MODE          STOP
   ALARM IN      STOP
  (EJECT OPERATION)
   MODE          EJECT
```

- Recording time mode setting
- Setting for operation when cassette is installed
- Tape-end operation settings
- Eject operation setting

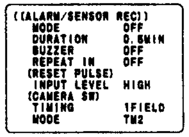
■ Menu screen 3 (VTR mode settings 2)



```
((VTR MODE SELECT 2))
  (POWER LOSS MEMORY)
   ** **-**-** **:**
  (VIDEO)
   MODE          AUTO
   IN            LINE
   S-VHS REC     ON
  (TIME ADJUSTING)
   SET TIME       0:00
   OPERATION     SLAVE
```

- Power loss memory display
- Video signal selection (model AG-6730 only)
- Time adjustment function settings (model AG-6730 only)

■ Menu screen 4 (alarm recording mode settings)

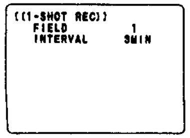


```
((ALARM/SENSOR REC))
   MODE          OFF
   DURATION      0.5MIN
   BUZZER        OFF
   REPEAT IN     OFF
  (RESET PULSE)
   INPUT LEVEL   HIGH
  (CAMERA SW)
   TIMING        1FIELD
   MODE          TM2
```

- Alarm recording mode settings
- Reset pulse selection
- Camera switch setting

■ Menu screen 5 (1-shot recording mode settings)

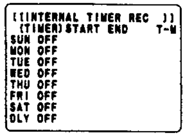
(model AG-6730 only)



```
((1-SHOT REC))
   FIELD            1
   INTERVAL      3MIN
```

- 1-shot recording mode setting

■ Menu screen 6 (internal timer recording mode settings)



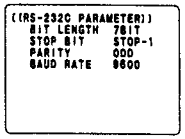
```
((INTERNAL TIMER REC  ))
 (TIMER)START END     T-M
SUN OFF
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

- Daily timer settings
- Weekly timer settings

■ The menu screens below appear only when the optional RS-232C Interface Adaptor AG-IA670 is installed.

(See page 1-32)

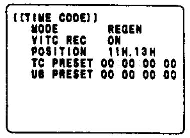
■ Menu screen 7 (RS-232C parameter settings)



```
((RS-232C PARAMETER))
   BIT LENGTH   7BIT
   STOP BIT     STOP-1
   PARITY       ODD
   BAUD RATE    9600
```

- RS-232C parameter settings

■ Menu screen 8 (time code settings)



```
((TIME CODE))
   MODE        REGEN
   VITC REC    ON
   POSITION    11H,13H
   TC PRESET 00:00:00:00
   UB PRESET 00 00 00 00
```

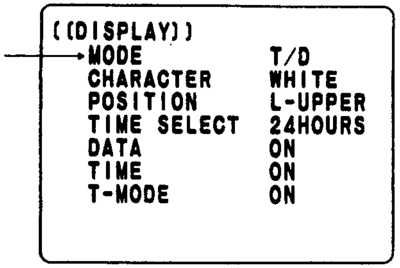
- Time code settings

NOTES

- The menu screens can be displayed only when the VTR is in the stop or eject status.
- Menu screen setting method
1) Set the PROGRAM switch to "MENU."
2) Use the "+" and "–" buttons to select the desired menu screen. The page following the last page is the first page; the page before the first page is the last page.
3) The first line flashes when the (▼) SHIFT button is pressed.
4) Select the setting items using the (▼) and (▶) SHIFT buttons.
5) Use the "+" and "–" SET buttons for the settings.
6) Upon completion of the settings, return the PROGRAM switch to the "OFF" position. The item settings will now be entered.

Menu Screen 1

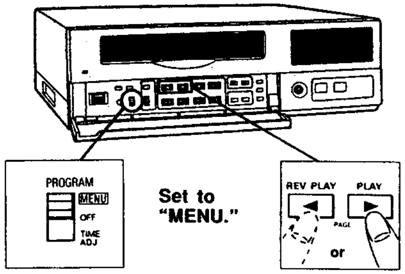
(Screen display settings)



AG-6730 only

```
((DISPLAY))
MODE            T/D
CHARACTER       WHITE
POSITION        L-UPPER
TIME SELECT     24HOURS
DATA            ON
TIME            ON
T-MODE          ON
```

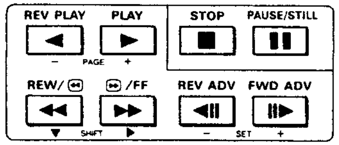
[Displaying the screens]


PROGRAM
MENU
OFF
TIME ADJ
REV PLAY
PLAY
PAGE
or

Set to "MENU."

Press one of these buttons until the desired menu screen appears.

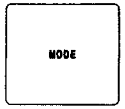
[Menu setting buttons]


REV PLAY
PLAY
STOP
PAUSE/STILL
– PAGE +
REW/
/FF
REV ADV
FWD ADV
▼ SHIFT ▶
– SET +

PAGE (–) button: Page down
PAGE (+) button: Page up
SHIFT (▼) button: Move to item below
SHIFT (▶) button: Move to item on the right
SET (–) button: Change item (decrement numerical value)
SET (+) button: Change item (increment numerical value)

What is displayed on the TV monitor is set on this screen.

■ Display mode selection (for model AG-6730 only; fixed at T/D for model AG-6040)

1


Select the screen which is to be usually displayed.
T/D: Time and date display screen
LAP: Lap time display screen
PAGE: Page count display screen [see Note 1] (This appears only when the time mode has been set to "000H.")

■ Display character type selection

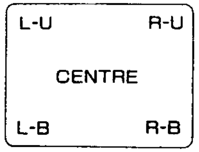
2

Select the type of characters to be displayed.
WHITE: White characters = ABCDF
BLACK: Outline characters = ABCDF

■ Display position selection

3

Select the display position.
L-UPPER: Upper left
R-UPPER: Upper right
L-BOTTOM: Bottom left
R-BOTTOM: Bottom right
CENTRE: Centre


L-U
R-U
CENTRE
L-B
R-B

■ Time display mode selection

4

TIME SELECT

Select whether the time is to be displayed on a 24-hour or AM/PM basis.
24 HOURS: 24-hour basis = 22:10:45
AM/PM: AM/PM basis = 10:10:45P

■ Date display ON/OFF

5

Set the date display ON or OFF.

■ Time display ON/OFF

6

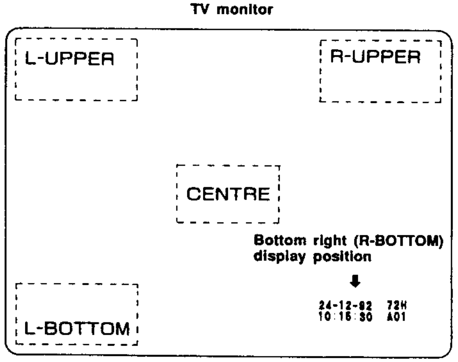
Set the time display ON or OFF.

■ Time mode display ON/OFF

7

Set the time mode display ON or OFF.

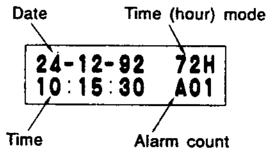
■ Regular screen


TV monitor
L-UPPER
R-UPPER
CENTRE
L-BOTTOM
24-12-92 72H
10:15:30 A01

Bottom right (R-BOTTOM) display position

NOTES

[Note 1]
Time and date display screen


Date
Time (hour) mode
24-12-92 72H
10:15:30 A01
Time
Alarm count

Lap time display screen
(model AG-6730 only)
The total recording time starting from the point in time when recording commenced is indicated in a second increments regardless of the present time. (The recording time is not incremented in the recording pause mode.)

LAP 0:00:00

When the RESET button is pressed, the lap time display can be reset to "0:00:00".

Page count display screen
(model AG-6730 only)
During 1-shot recording, each frame recorded counts as a page, and the total number of pages (frames) is displayed on this screen. (For details on 1-shot recording, see page 1-25.)

999999

When the RESET button is pressed, the page count display can be reset to "0."

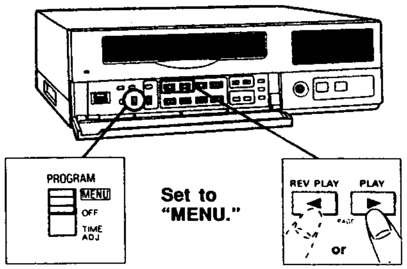
[Other notes]
The item settings are entered when the PROGRAM switch is returned to the "OFF" position.

Menu Screen 2

(VTR mode settings 1)

```
[[VTR MODE SELECT 1]]
 [REC T-MODE]   OFF
 [TAPE IN]
  MODE          STOP
 [TAPE END]
  MODE          STOP
  ALARM IN      STOP
 [EJECT OPERATION]
  MODE          EJECT
```

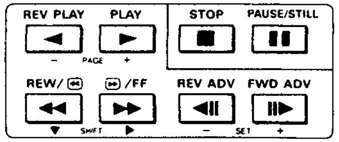
[Displaying the screens]



Set to "MENU."

Press one of these buttons until the desired menu screen appears.

[Menu setting buttons]



PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

The VTR mode settings are performed on this screen.

■ Recording time mode selection

1
```
REC T-MODE
```

The recording time mode is set.
When the recording is started, the unit is always placed in the time mode which was set.

OFF: The time mode can be set as desired using the time mode button on the VTR's sub panel. The mode can be changed even during recording.
3H: 3-hour mode (compatible with the standard mode of ordinary VTRs).
L12H: 12-hour mode (linear slow recording)
L24H: 24-hour mode (linear slow recording)
24H: 24-hour mode (time lapse recording at 0.18 sec. intervals)
48H: 48-hour mode (time lapse recording at 0.34 sec. intervals)
72H: 72-hour mode (time lapse recording at 0.5 sec. intervals)
84H: 84-hour mode (time lapse recording at 0.58 sec. intervals)
120H: 120-hour mode (time lapse recording at 0.82 sec. intervals)
180H: 180-hour mode (time lapse recording at 1.22 sec. intervals)
240H: 240-hour mode (time lapse recording at 1.62 sec. intervals)
480H: 480-hour mode (time lapse recording at 3.22 sec. intervals)
000H: 1-shot recording mode (see page 1-25).

[See Notes 1 and 2]

■ Sound cannot be recorded in the time lapse recording or 1-shot recording modes.

■ Selection of operation when cassette is installed

2
```
[TAPE IN]
MODE
```

Select how the VTR is to operate when the cassette is installed.
STOP: Stop mode
REC: Automatic recording mode [see Note 3]
AUTO: When a cassette tape is loaded, it is first rewound to its beginning and then recording is commenced automatically.

■ Selection of operation at tape-end

3
```
[TAPE END]
MODE
```

Select how the VTR is to operate at the tape-end.
STOP: Stop mode
BUZZER: Stop and the buzzer sounds.
REW: Automatic rewinding mode [see Note 4]
REPEAT: Repeat recording mode [see Note 5]

■ Setting auto rewind function release when an alarm input is generated

4
```
[TAPE END]
ALARM IN
```

This setting selects whether the auto rewind function is to be released when there is an alarm input while recording is in progress.
STOP: The auto rewind function is released. The VTR is set to the stop mode at the tape-end.
CONTINUE: The auto rewind function is not released.

■ Selection of cassette EJECT button

5
```
[EJECT OPERATION]
MODE
```

Select the operation which is to be performed when the EJECT button is pressed.
EJECT: The cassette is ejected as soon as the button is pressed.
AUTO: When the button is pressed, the tape is automatically rewound to its start before the cassette is ejected.

NOTES

[Note 1]
The VTR's time (hour) modes are based on the use of a 3-hour tape. If the cassette used has a different duration, the hour modes will be as follows:
- 120-minute tape: 2/3 of selected time
- 90-minute tape: 1/2 of selected time
- 60-minute tape: 1/3 of selected time
- 30-minute tape: 1/6 of selected time

[Note 2]
Linear slow recording
With this kind of recording, the tape travel speed is reduced and the sound is recorded continuously. (Sound can be recorded.)

Time lapse recording
Long-duration recording is possible by recording while advancing the tape intermittently. (Sound cannot be recorded.)

[Note 3]
Automatic recording mode
Recording is started automatically just by installing the cassette.

[Note 4]
Auto rewind function
When the tape reaches its end during recording, it is automatically rewound to its start.

[Note 5]
Auto repeat recording function
When the tape reaches its end during recording, it is automatically rewound to its start and recorded again (or repeatedly).

[Other notes]
The item settings are entered when the PROGRAM switch is returned to the "OFF" position.

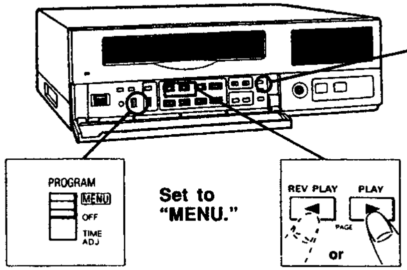
Menu Screen 3

(VTR mode settings 2)

```
[(VTR MODE SELECT 2)]
 (POWER LOSS MEMORY)
  ** **-**-** **:**
 (VIDEO)
  MODE           AUTO
  IN             LINE
  S-VHS REC      ON
 (TIME ADJUSTING)
  SET TIME        9:00
  OPERATION      SLAVE
```

AG-6730 only (IN to OPERATION)

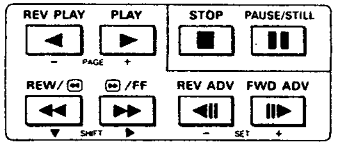
[Displaying the screens]



Set to "MENU."

Press one of these buttons until the desired menu screen appears.

[Menu setting buttons]



PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

The VTR mode settings are performed on this screen.

■ Power loss memory display [See Note 1]

1

```
(POWER LOSS
     MEMORY)
```

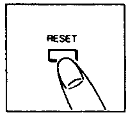
This screen displays the power loss memory.

- When the SHIFT (▼) button is pressed so that the number flashes and then the SET "+" or "–" button is pressed, data in the memory on up to the last four power failures is indicated in sequence.
- The power loss memory data can be cleared as below.

```
06 25-12-02  2:08
```

While flashing

⬇



Press this button

⬇

```
** **-**-**  **:**
```

The memory is now cleared.

- The following display appears for the power loss memory data if the time/date has not been set or when there is no data in the memory.

```
** **-**-**  **:**
```

■ Selecting the video signal mode

2

```
(VIDEO)
MODE
```

Select the operation of the auto colour/b&w selector circuit.

AUTO:	The circuit is automatically switched to colour or black-and-white, whichever corresponds to the input signal. (Regular setting) [See Note 1]
COLOUR:	For colour signal input only
B/W:	For black-and-white signal input only [See Note 2]

■ Selecting the input video signal (model AG-6730 only)

3

```
(VIDEO)
IN
```

Select the input video signal.

LINE:	The signal supplied to the video input connector (line) serves as the input video signal.
S-VIDEO:	The signal supplied to the S video connector serves as the input signal.

■ Setting the S-VHS recording mode (model AG-6730 only)

4

```
S-VHS REC
```

Select the S-VHS recording mode.

ON:	Whether the tape is VHS or S-VHS is automatically identified, and recording proceeds in the corresponding mode.
OFF:	Recording always proceeds in the VHS mode regardless of the type of cassette used. During playback, the tape type is automatically identified.

■ Time adjust function time setting (model AG-6730 only)

5

```
(TIME ADJUST)
SET TIME
```

Set the time.
Only the "hours" can be set.
The "minutes" remains at "00."

Set the time using the set "+" or "–" button.

■ Time adjust function selection (model AG-6730 only) [See Note 4]

6

```
(TIME ADJUST)
OPERATION
```

Select the time adjust function.

SLAVE:	The VTR's time is set by the external switch or master VTR.
MASTER:	Using the VTR as the master clock, the time of another VTR is set.

NOTES

[Note 1]
Power loss memory
When power failures have occurred, the number of occurrences together with their dates and times are counted up to a maximum of 99 times, and the data of the 4 most recent occurrences is stored in the memory.

[Note 2]
Do not mix black-and-white and colour signals when supplying them to the video input connectors. This will cause sync fluctuations and generate noise.

[Note 3]
When supplying signals which may cause the circuit to make an error in its automatic identification, set to COLOUR for colour signals and to B/W for black-and-white signals. When colour signals are supplied with a B/W setting or black-and-white signals are supplied with a COLOUR setting, unnatural video signals will be recorded.

[Note 4]
SLAVE mode
- When the rear panel's time adjust input terminal is shorted to ground, the VTR's time is set to the time established in step 5, and pulses (L) are output from the time adjust output terminal.

MASTER mode
- Pulses (L) are output from the time adjust output terminal when the VTR's time tallies with the set time.

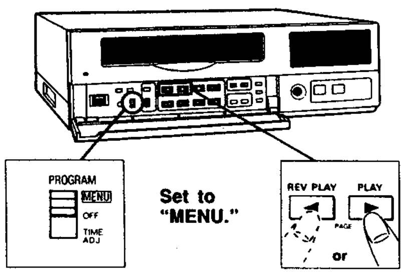
[Other notes]
The item settings are entered when the PROGRAM switch is returned to the "OFF" position.

Menu Screen 4

(Alarm recording mode settings)

```
((ALARM/SENSOR REC))
  MODE          OFF
  DURATION      0.5MIN
  BUZZER        OFF
  REPEAT IN     OFF
 (RESET PULSE)
  INPUT LEVEL   HIGH
 (CAMERA SW)
  TIMING          1FIELD
  MODE          TM2
```

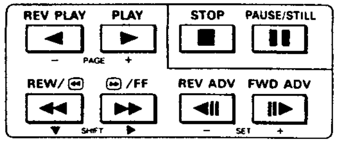
[Displaying the screens]



Set to "MENU."

Press one of these buttons until the desired menu screen appears.

[Menu setting buttons]



PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

The alarm recording mode settings are performed on this screen.

■ Selecting the alarm recording time mode

1 MODE

Select the recording time mode when an alarm input is received.

OFF:	No alarm recording.
3H:	3-hour mode
L12H:	12-hour mode (linear slow)
L24H:	24-hour mode (linear slow)
24H:	24-hour mode (time lapse)
NO CHANGE:	The recording time remains unchanged even if there is an alarm input.

Alarm input ↓

← Tape start   Tape end →

Recording	Alarm recording mode	Recording

- When there is an alarm input during recording in one of the time lapse modes, the recording time mode switches to the designated mode and the emergency scene is faithfully recorded.

■ Setting the alarm recording duration

2 DURATION

Set how long the alarm recording is to last from the start to the end.

0.5MIN-3.0MIN:	The time can be set in 30-second increments from 0.5 to 3 minutes.
CONTINUE:	Alarm recording continues until the tape-end.
MANUAL:	Alarm recording is performed while the alarm input continues to be received.

■ Buzzer ON/OFF

3 BUZZER

Set whether the buzzer is to sound during alarm recording.

OFF:	The buzzer does not sound.
ON:	The buzzer sounds while alarm recording is in progress.

- Press any function button to release the buzzer.

■ Setting the repeat-in function

4 REPEAT IN

Set whether alarm recording is to proceed when there has been an alarm input while the tape was being rewound automatically in the recording mode.

OFF:	No alarm recording.
ACCEPT:	Alarm recording [See Note 1]

■ Selecting the alarm reset pulse acceptance level

5 (RESET PULSE) INPUT LEVEL

Select the acceptance level of the alarm reset pulse.

HIGH:	The high level is set.
LOW:	The low level is set. (See page 1-30)

■ Setting the timing

6 (CAMERA SW) TIMING

Set the camera switchover timing signal which is to be output by the external sequential switcher during recording.

The cameras are switched every 1-, 2-, 3-, 4-, 5-, 10-, 20-, 25- or 50-fields. [See Note 2]

■ Selecting the camera switchover mode

7 (CAMERA SW) MODE

Select whether the camera switching is to be done in field or frame units. [See Note 3]

TM2: Switching in field units.

TM1: Switching in frame units.

NOTES

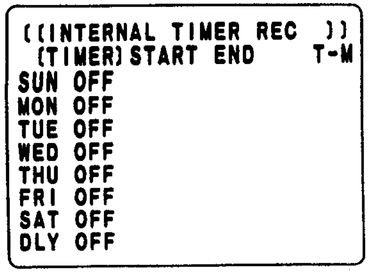
[Note 1]
When "ACCEPT" is selected in the repeat-in function, be sure to set to other modes than "OFF" in step 1.

[Note 2]
When "TM1" has been selected as the camera switchover mode in step 7, the cameras are switched in frame units.

[Note 3]
Select "TM1" when the frame switcher is connected and "TM2" when any other sequential switcher is connected.

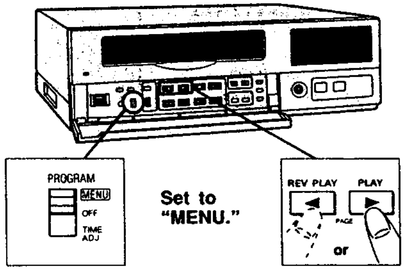
[Other notes]
The item settings are entered when the PROGRAM switch is returned to the "OFF" position.

Menu Screen 6
(Internal timer recording mode settings)



```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END    T-M
SUN OFF
MON OFF
TUE OFF
WED OFF
THU OFF
FRI OFF
SAT OFF
DLY OFF
```

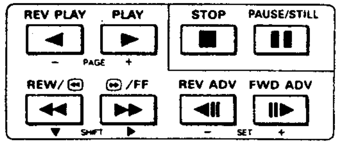
[Displaying the screens]



Set to "MENU."

Press one of these buttons until the desired menu screen appears.

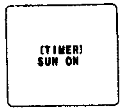
[Menu setting buttons]



PAGE (–) button:	Page down
PAGE (+) button:	Page up
SHIFT (▼) button:	Move to item below
SHIFT (▶) button:	Move to item on the right
SET (–) button:	Change item (decrement numerical value)
SET (+) button:	Change item (increment numerical value)

The internal timer recording modes are set on this screen.

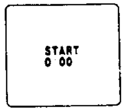
■ Internal timer mode ON/OFF

1 

```
[TIMER]
SUN ON
```

Set the internal timer mode ON or OFF.
ON: The internal timer recording mode is established.
OFF: The internal timer recording mode is not established.

■ Setting the timer recording start time

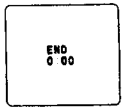
2 

```
START
0 00
```

Set the time at which the internal timer recording is to start.

Select the setting items using the SHIFT buttons and set the numerical values using the SET buttons.

■ Setting the timer recording end time

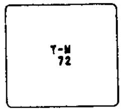
3 

```
END
0 00
```

Set the time at which the internal timer recording is to end.

Select the setting items using the shift buttons and set the numerical values using the SET buttons.

■ Setting the recording time mode

4 

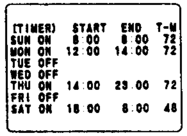
```
T-M
72
```

Set the recording time mode for internal timer recording.
3H, L12H, L24H, 24H, 48H, 72H, 84H, 120H, 180H, 240H, 480H, 000H

■ Weekly timer recording

The internal timer recording start and end times can be set once a day for each day of the week from Sunday through Saturday.

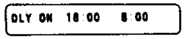
For each day of the week, set the internal timer ON/OFF mode, recording start and end times, and recording mode.



```
[TIMER]  START   END  T-M
SUN ON   8:00   8:00   72
MON ON  12:00  14:00   72
TUE OFF
WED OFF
THU ON  14:00  23.00   72
FRI OFF
SAT ON  18:00   8:00   48
```

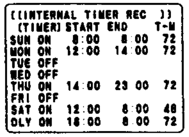
■ Daily timer recording

Internal timer recording can be started and ended at the the same preset times every day.



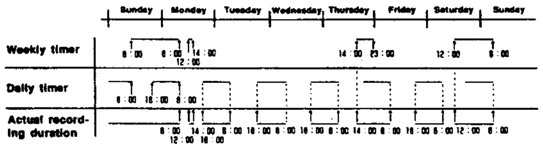
```
DLY ON 18 00  8 00
```

■ Using the weekly and daily timers in combination



```
[[INTERNAL TIMER REC  ]]
 [TIMER]START END    T-M
SUN ON   8:00   8:00  72
MON ON  12:00  14:00  72
TUE OFF
WED OFF
THU ON  14:00  23 00  72
FRI OFF
SAT ON  12:00   8:00  48
DLY ON  18:00   8.00  72
```

When the settings are as per the screen shown on the left, the weekly and daily timer recording and the actual recording durations on the tape will be as follows.



■ If the recording times overlap in places between the weekly and daily settings, the daily timer recording time (hour) mode takes precedence.

NOTES

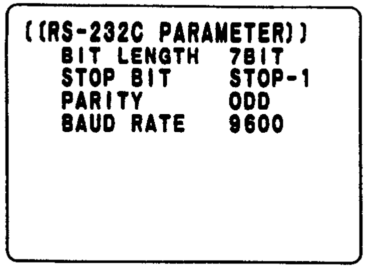
[Notes]

- Internal timer recording is not activated if the date and time have not been set.
- The time setting display (24-hour or PM/AM basis) accords with the mode assigned by the time/date setting.
- If the internal timer mode is set "OFF" after the start and end times have been set with the mode "ON", the time setting display will be cleared but will then re-appear when the mode is set back to "ON."
- When the weekly timer and daily timer recording functions are used in combination, the time mode set for the daily timer recording takes precedence if there should be any overlap between the two time settings.
- The item settings are entered when the PROGRAM switch is returned to the "OFF" position.

■ This screen appears only when the optional RS-232C connector has been installed.

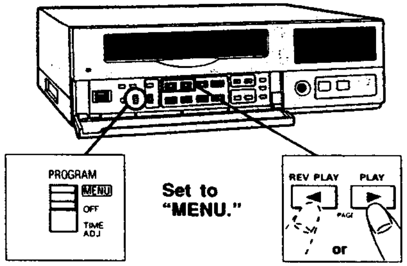
Menu Screen 7

(RS-232C parameter setting)



```
((RS-232C PARAMETER))
  BIT LENGTH   7BIT
  STOP BIT     STOP-1
  PARITY       ODD
  BAUD RATE    9600
```

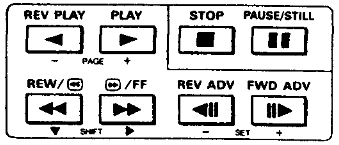
[Displaying the screens]


PROGRAM
MENU
OFF
TIME ADJ
REV PLAY
PLAY
PAGE
or

Set to "MENU."

Press one of these buttons until the desired menu screen appears.

[Menu setting buttons]


REV PLAY
PLAY
– PAGE +
STOP
PAUSE/STILL
REW/⏪
⏩/FF
▼ SHIFT ▶
REV ADV
FWD ADV
– SET +

PAGE (–) button: Page down
PAGE (+) button: Page up
SHIFT (▼) button: Move to item below
SHIFT (▶) button: Move to item on the right
SET (–) button: Change item (decrement numerical value)
SET (+) button: Change item (increment numerical value)

The parameter setting for data exchange in RS-232C format can be made in this menu.

■ Setting the character length

1

Set the character length.
7BIT: 7 bits
8BIT: 8 bits

[see Note 1]

■ Setting the stop bit

2

Set the stop bit.
STOP-1: 1 bit
STOP-2: 2 bits

[see Note 2]

■ Setting the parity bit

3

Set the parity bit
ODD: Odd number
EVEN: Even number
NONE: None

[see Note 3]

■ Setting the baud rate

4

Set the baud rate (data transmission speed).
1200: 1200 bits per second
2400: 2400 bits per second
4800: 4800 bits per second
9600: 9600 bits per second

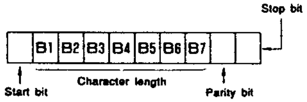
[see Note 4]

■ RS-232C

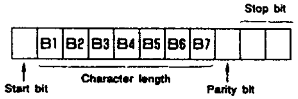
"RS-232C" is an interface standard for data terminals and data communications equipment employing serial binary data exchange as stipulated under the RS-232 CCIR standard. Using this RS-232C interface, this VTR can be controlled by a personal computer.

■ Code format

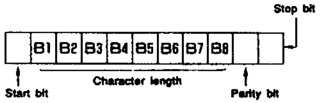
Bit length: **7BIT**
Stop bit: **STOP-1**
Parity: **EVEN**


Stop bit
B1
B2
B3
B4
B5
B6
B7
Start bit
Character length
Parity bit

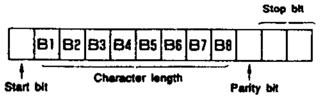
Bit length: **7BIT**
Stop bit: **STOP-2**
Parity: **ODD**


Stop bit
B1
B2
B3
B4
B5
B6
B7
Start bit
Character length
Parity bit

Bit length: **8BIT**
Stop bit: **STOP-1**
Parity: **EVEN**


Stop bit
B1
B2
B3
B4
B5
B6
B7
B8
Start bit
Character length
Parity bit

Bit length: **8BIT**
Stop bit: **STOP-2**
Parity: **ODD**

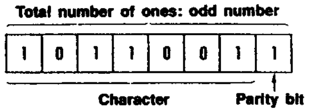

Stop bit
B1
B2
B3
B4
B5
B6
B7
B8
Start bit
Character length
Parity bit

NOTES

[Note 1]
Character (data) length
This is the number of bits that configure the character data.

[Note 2]
Stop bit
Added to each character are the start bit which indicates the start of the data and the stop bit which indicates the end of the data. The start bit is fixed at 1 bit but the stop bit can be set to either 1 or 2 bits.

[Note 3]
Parity bit
The parity bit is added for checking transmission errors. When data is to be transmitted, the total number of ones for the character is made an even number or odd number of ones depending on the setting of this bit, and this is checked at the receiving end.


Total number of ones: odd number
1
0
1
1
0
0
1
1
Character
Parity bit

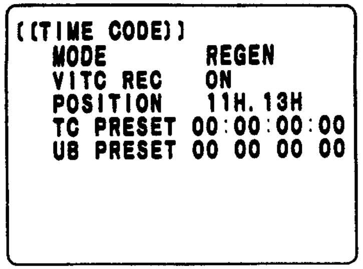
In the above case:
Parity error for an even number under parity check.
No parity error for an odd number under parity check.

[Note 4]
Baud rate (data transmission rate)
This is the volume of data which can be sent in one second. For instance, a rate of 2400 bps means that 2400 bits of data is sent in one second.

■ This screen appears only when the optional RS-232C connector has been installed.

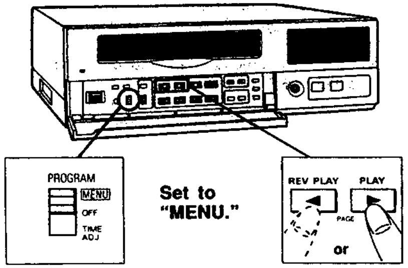
Menu Screen 8

(Time code setting)



```
[[TIME CODE]]
  MODE         REGEN
  VITC REC     ON
  POSITION     11H.13H
  TC PRESET 00:00:00:00
  UB PRESET 00 00 00 00
```

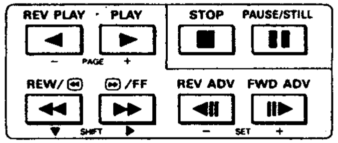
[Displaying the screens]



Set to "MENU."

Press one of these buttons until the desired menu screen appears.

[Menu setting buttons]



PAGE (–) button:	**Page down**
PAGE (+) button:	**Page up**
SHIFT (▼) button:	**Move to item below**
SHIFT (▶) button:	**Move to item on the right**
SET (–) button:	**Change item (decrement numerical value)**
SET (+) button:	**Change item (increment numerical value)**

Recording the time code is a handy way of finding absolute positions on the tape.

■ Selecting the time code.

1 `MODE`

Select the time code mode.

REGEN: The regeneration mode is established. The VTR's clock value serves as the time code value, and the data and alarm count are written into the user's bit.

P FREE-RUN: The count starts from a preset time code value. The count continues to advance regardless of whether the VTR is recording or stopped. [See Note 1]

P REC-RUN: The count starts from a preset time code value. The count advances only during recording. [See Note 2]

■ Setting the time code (VITC) recording ON/OFF

2 `VITC REC`

Set the time code (VITC) recording ON or OFF.
ON: The time code is recorded.
OFF: The time code is not recorded.

[See Note 3]

■ Setting the time code (VITC) insertion lines

3 `POSITION`

Set the lines at which the VITC code is to be inserted.
7H-22H. Select two insertion lines which are not side by side.

[See Note 4]

■ Setting the time code preset (default) value

4 `TC PRESET`

Set the time code default value.
00:00:00:00: Set the values for hours/minutes/seconds/frames.

- Any value from 00:00:00:00 to 23:59:59:24 can be set.

■ Setting the user's bit preset value

5 `UB PRESET`

Set the user's bit preset value.
00 00 00 00: Set an 8-digit alphanumeric string.

- Any of the following 16 alphanumerics can be used: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F.

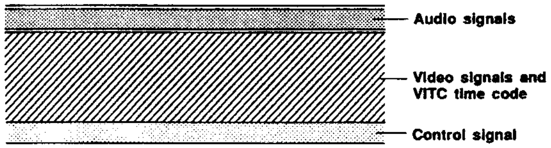
[See Note 5]

■ Time code

00 : 00 : 00 : 00

Hours : minutes : seconds : frames   1 second = Approx. 25 frames

Position where the time code is recorded on the tape



NOTES

[Note 1]
Free-running mode
In this mode, the time code is counted at all times. It is useful when recording durations in real time.

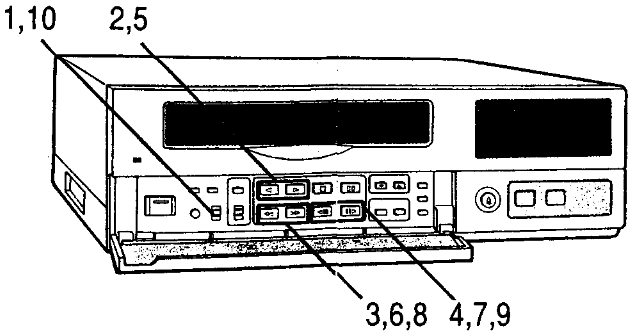
[Note 2]
Rec-running mode
In this mode, the time code is counted only while the VTR is in the recording mode. It is handy when ascertaining accurately an absolute position on the tape.

[Note 3]
VITC
This stands for vertical interval time code. It is a signal which is recorded on the vertical lines on the tape. It is recorded together with the video signals.

[Note 4]
Insertion line
This refers to the vertical line position where the VITC is recorded. Two lines are selected.

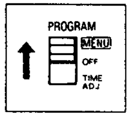
[Note 5]
User's bit
This is a code which the user sets as desired. It is useful for recording a control number or a tape's serial number, for instance, on the tape.

1-Shot Recording



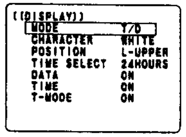
The steps for 1-shot recording used for data files and animation, for instance, are described in this section.

1



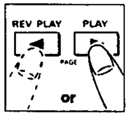
Set this switch to "MENU."

•▭ is no indication for AG-6040.

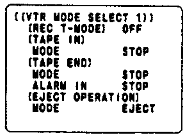


```
((DISPLAY))
 MODE          T/D
 CHARACTER     WHITE
 POSITION      L-UPPER
 TIME SELECT   24HOURS
 DATA          ON
 TIME          ON
 T-MODE        ON
```

2

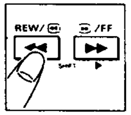


Press one of these buttons to display menu screen 2.

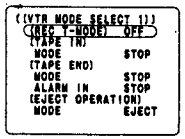


```
((VTR MODE SELECT 1))
 (REC T-MODE)  OFF
 (TAPE IN)
  MODE         STOP
 (TAPE END)
  MODE         STOP
  ALARM IN     STOP
 (EJECT OPERATION)
  MODE         EJECT
```

3

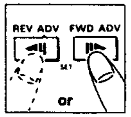


Press this button to select "REC T-MODE."



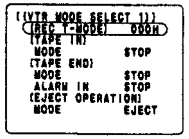
```
((VTR MODE SELECT 1))
 (REC T-MODE)  OFF
 (TAPE IN)
  MODE         STOP
 (TAPE END)
  MODE         STOP
  ALARM IN     STOP
 (EJECT OPERATION)
  MODE         EJECT
```

4



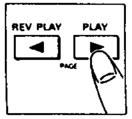
Press one of these buttons to display "000H."

[See Note 1]



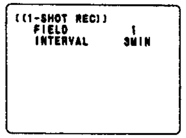
```
((VTR MODE SELECT 1))
 (REC T-MODE)  000H
 (TAPE IN)
  MODE         STOP
 (TAPE END)
  MODE         STOP
  ALARM IN     STOP
 (EJECT OPERATION)
  MODE         EJECT
```

5



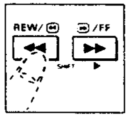
Press this button to display menu screen 5.

(This step applies to model AG-6730 only.)



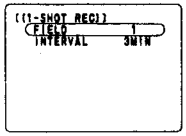
```
((1-SHOT REC))
  FIELD         1
  INTERVAL      3MIN
```

6



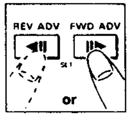
Press one of these buttons to select "FIELD."

(This step applies to model AG-6730 only.)



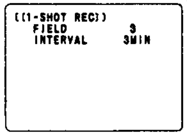
```
((1-SHOT REC))
  FIELD         1
  INTERVAL      3MIN
```

7



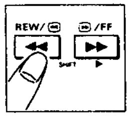
Press one of these buttons to set the 1-shot recording time.

[See Note 2]
(This step applies to model AG-6730 only.)



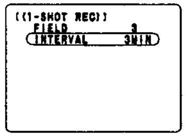
```
((1-SHOT REC))
  FIELD         3
  INTERVAL      3MIN
```

8



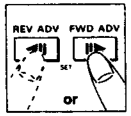
Press this button to select "INTERVAL."

(This step applies to model AG-6730 only.)



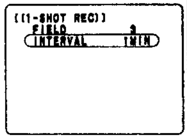
```
((1-SHOT REC))
  FIELD         3
  INTERVAL      3MIN
```

9



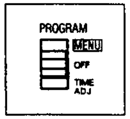
Press one of these buttons to set the interval time.

[See Note 3]
(This step applies to model AG-6730 only.)

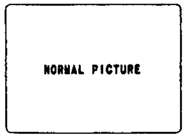


```
((1-SHOT REC))
  FIELD         3
  INTERVAL      1MIN
```

10



Set this switch to "OFF."



```
NORMAL PICTURE
```

↓ (Continued overleaf)

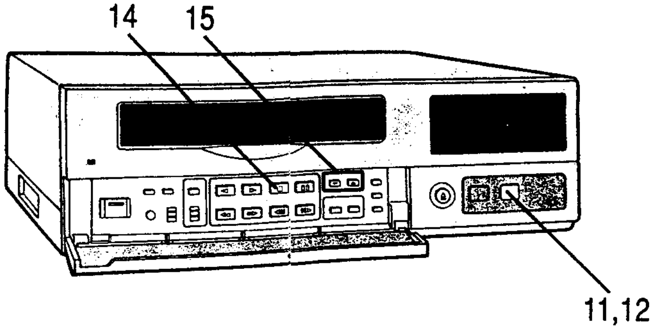
NOTES

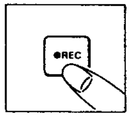
[Note 1]
When "REC T-MODE" on menu screen 2 is "OFF," the time mode can be set to "000H" also by pressing the TIME MODE button on the front sub panel.

[Note 2]
Each time the SET button is pressed, the time for recording one frame is successively changed as follows: 1 → 2 → 3 → 4 → 5 → 10 → 15 → 20 → 25 → 30 → 40 → 50 → 1 → 2 ... (Unit: field)
(This time is fixed at 1 field for model AG-6040.)

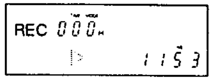
[Note 3]
Each time the SET button is pressed, the interval time is successively changed as follows: 1 → 2 → 3 → 1 ... (Unit: minute)
(This time is fixed at 3 minutes for model AG-6040.)

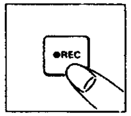
1-Shot Recording
(Continued)



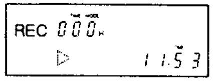
11


When this button is pressed, few shots are recorded and the VTR is set to the recording standby mode.

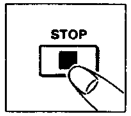


12


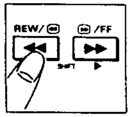
When the button is pressed again, 1 shot is recorded and the VTR is set to the recording standby mode.



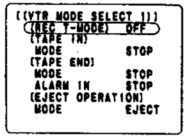
13
- **One frame (shot) is recorded each time this button is subsequently pressed.**
- **If the REC button is not pressed, one frame (shot) is recorded automatically when the interval time elapses.**

14


Press this button to stop 1-shot recording.

15


To release this mode, set to any position except "000H."



```
((VTR MODE SELECT 1))
 (REC T-MODE)    OFF
 (TAPE IN)
  MODE           STOP
 (TAPE END)
  MODE           STOP
  ALARM IN       STOP
 (EJECT OPERATION)
  MODE           EJECT
```

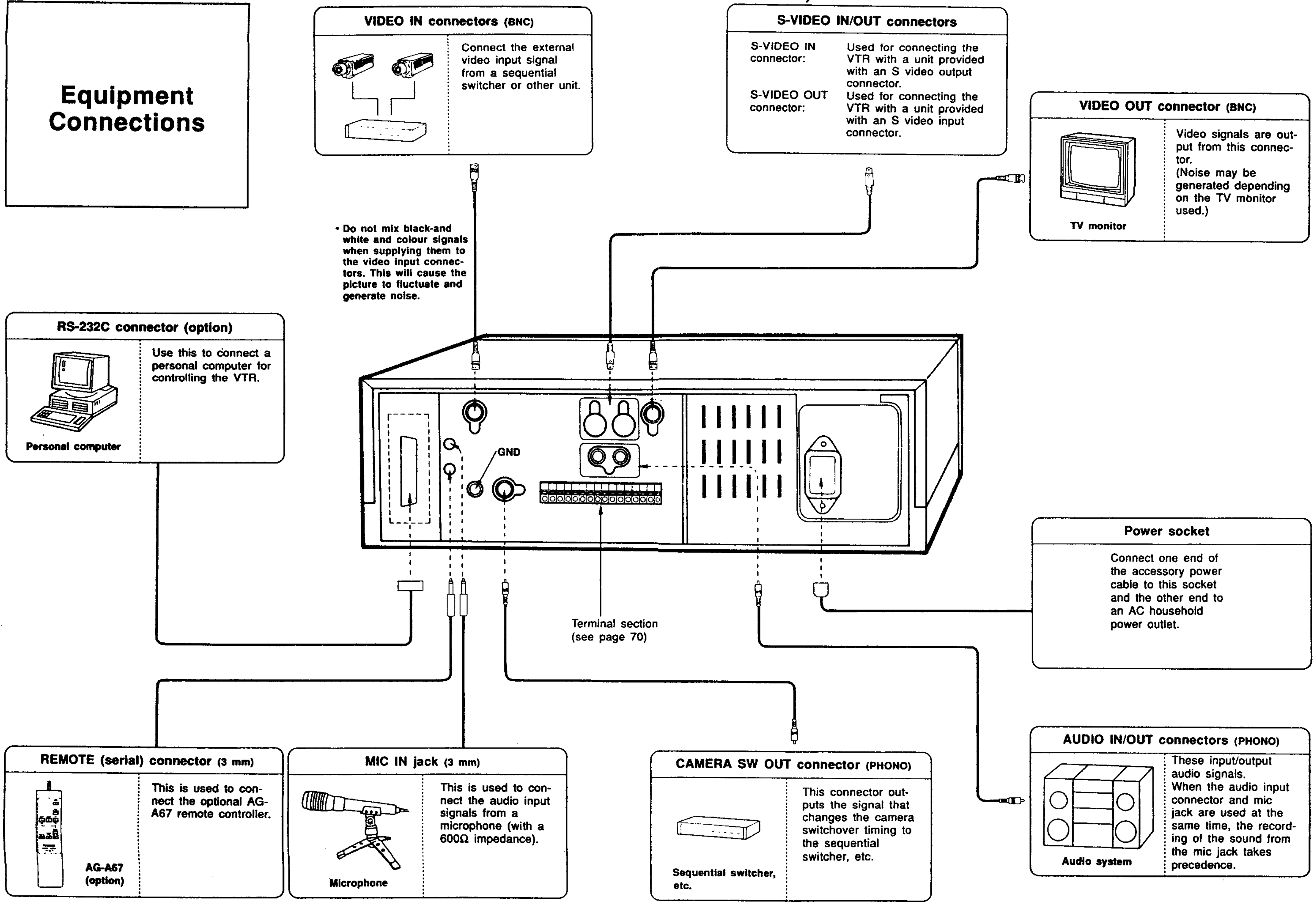
- 1-shot recording using a remote switch
  Besides activating 1-shot recording by pressing the REC button on the VTR's front panel, it is also possible to connect a remote switch and activate 1-shot recording from a distance by remote control.

- Ask your dealer to give you details about a remote switch.
- The ON time for the remote switch must be at least 100ms.
- An interval of at least 1 second is required to turn on the remote switch. Refer to page 74 for the signal levels.

NOTES

[Other notes]
Refer to page 49 for the lengths of time during which recording can be performed in the 1-shot recording mode.

Equipment Connections



VIDEO IN connectors (BNC)

Connect the external video input signal from a sequential switcher or other unit.

AG-6730 only

S-VIDEO IN/OUT connectors

S-VIDEO IN connector:	Used for connecting the VTR with a unit provided with an S video output connector.
S-VIDEO OUT connector:	Used for connecting the VTR with a unit provided with an S video input connector.

VIDEO OUT connector (BNC)

Video signals are output from this connector.
(Noise may be generated depending on the TV monitor used.)

- Do not mix black-and white and colour signals when supplying them to the video input connectors. This will cause the picture to fluctuate and generate noise.

RS-232C connector (option)

Use this to connect a personal computer for controlling the VTR.

Power socket

Connect one end of the accessory power cable to this socket and the other end to an AC household power outlet.

Terminal section
(see page 70)

REMOTE (serial) connector (3 mm)

This is used to connect the optional AG-A67 remote controller.

MIC IN jack (3 mm)

This is used to connect the audio input signals from a microphone (with a 600Ω impedance).

CAMERA SW OUT connector (PHONO)

This connector outputs the signal that changes the camera switchover timing to the sequential switcher, etc.

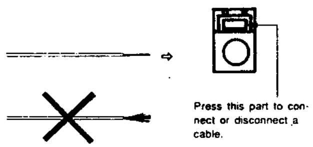
AUDIO IN/OUT connectors (PHONO)

These input/output audio signals.
When the audio input connector and mic jack are used at the same time, the recording of the sound from the mic jack takes precedence.

Terminal Connections

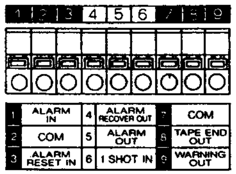
Notice for cables connected to terminals

Twist the end of the cables or solder it.


Press this part to connect or disconnect a cable.

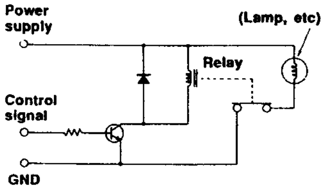
- Short-circuiting may result if the end of a cable has not been twisted securely.

Terminal section of model AG-6040


1
2
3
4
5
6
7
8
9
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT

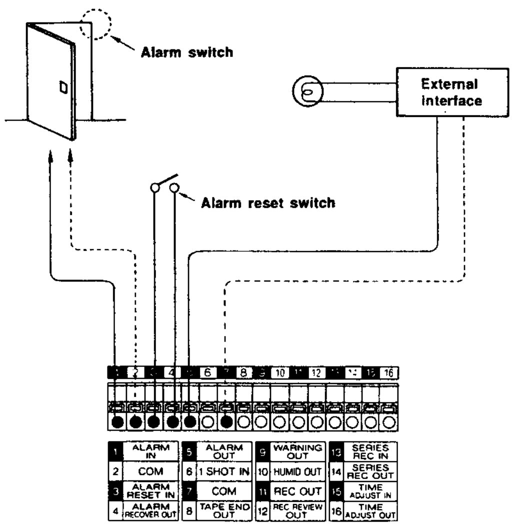
External interfacing specifications

Example of lamp lighting with high signal.


Power supply
(Lamp, etc)
Relay
Control signal
GND

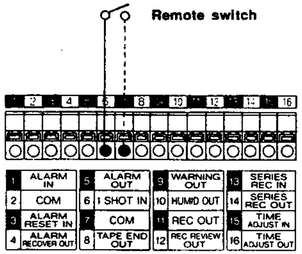
- Use devices with ratings which match the actual conditions of use.

Connections for alarm recording


Alarm switch
External interface
Alarm reset switch
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

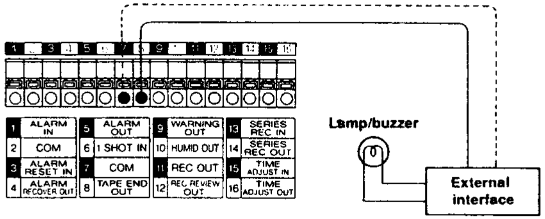
- Alarm recording is commenced when the alarm switch is set ON.
- Alarm recording is released when the alarm reset switch is set ON.
- When alarm recording is started, the alarm lamp and buzzer are activated. Use a +12 V alarm lamp and buzzer.

Connections for 1-shot recording


Remote switch
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

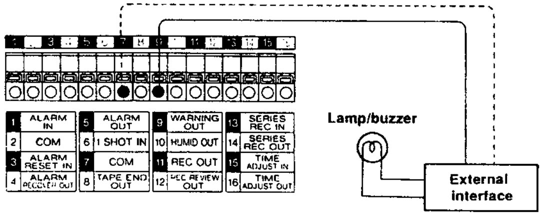
- When the remote switch is set ON, one shot (frame) is recorded.
- The ON time for the remote switch must be at least 200ms.
- An interval of at least 1 second is required to turn on the remote switch.

Connections for tape-end output


Lamp/buzzer
External interface
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

- When the cassette tape reaches its end during recording, the alarm unit connected externally is activated.

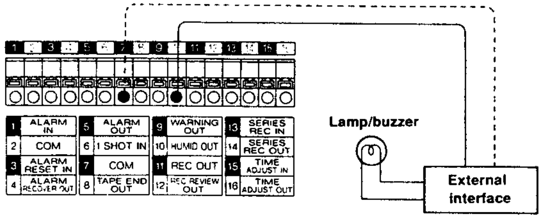
Connections for auto OFF output


Lamp/buzzer
External interface
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

- When a malfunction has occurred in this VTR, the alarm unit connected externally is activated.

In such a case, an error code will appear on the display (see page 1-31).

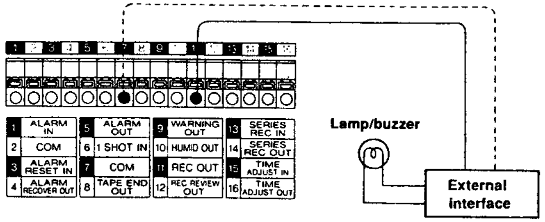
Connections for dew output (model AG-6730 only)


Lamp/buzzer
External interface
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

- When dew (condensation) has formed inside this VTR, the alarm unit connected externally is activated.

In such a case, "ď" will appear on the display (see page 1-31).

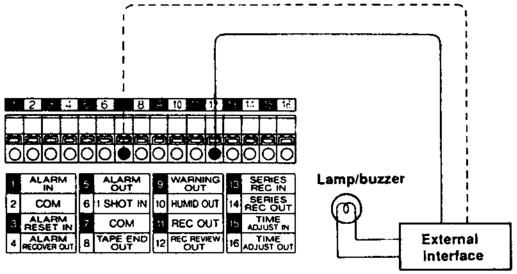
Connections for recording output (model AG-6730 only)


Lamp/buzzer
External interface
ALARM IN
COM
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
1 SHOT IN
COM
TAPE END OUT
WARNING OUT
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC IN
SERIES REC OUT
TIME ADJUST IN
TIME ADJUST OUT

- When the VTR is set to the recording mode, the alarm unit connected externally is activated.

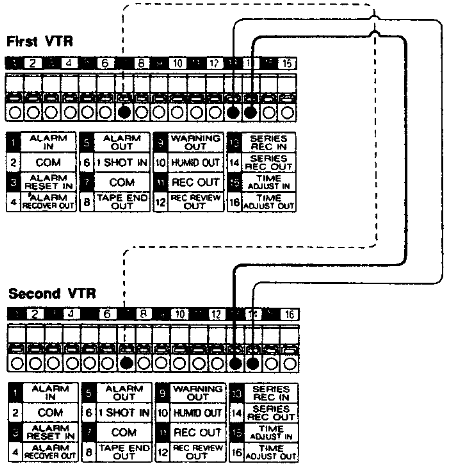
Terminal Connections
(Continued)

Connections for recording review
(model AG-6730 only)


2
4
6
8
10
12
14
16
1 ALARM IN
2 COM
3 ALARM RESET IN
4 ALARM RECOVER OUT
5 ALARM OUT
6 1 SHOT IN
7 COM
8 TAPE END OUT
9 WARNING OUT
10 HUMID OUT
11 REC OUT
12 REC REVIEW OUT
13 SERIES REC IN
14 SERIES REC OUT
15 TIME ADJUST IN
16 TIME ADJUST OUT
Lamp/buzzer
External interface

- The external unit is actuated if it was not possible for the proper video level to be obtained after the recording check operation due to dirt on the heads or deterioration of the tape. At the same time, the cassette mark (▭) on the display tube will flash. (See page 1-31)

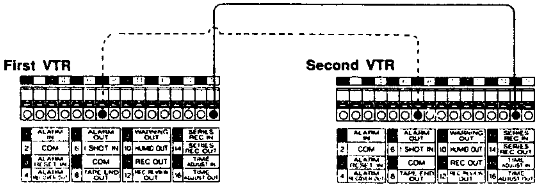
Connections for series recording
(model AG-6730 only)


First VTR
Second VTR
2
4
6
8
10
12
14
16
1 ALARM IN
2 COM
3 ALARM RESET IN
4 ALARM RECOVER OUT
5 ALARM OUT
6 1 SHOT IN
7 COM
8 TAPE END OUT
9 WARNING OUT
10 HUMID OUT
11 REC OUT
12 REC REVIEW OUT
13 SERIES REC IN
14 SERIES REC OUT
15 TIME ADJUST IN
16 TIME ADJUST OUT

- The second VTR starts recording as soon as the tape in the first VTR reaches its end.
- The first VTR starts recording again as soon as the tape in the second VTR reaches its end.
- When a third VTR is connected, the series output of the second unit is connected to the series input of the third unit.

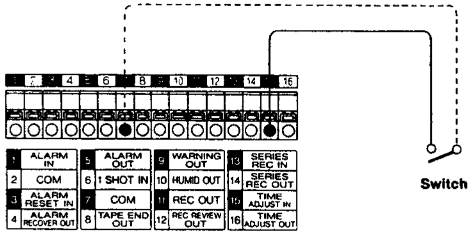
Connections for time setting (model AG-6730 only)

- Setting the time of another VTR using this VTR


First VTR
Second VTR

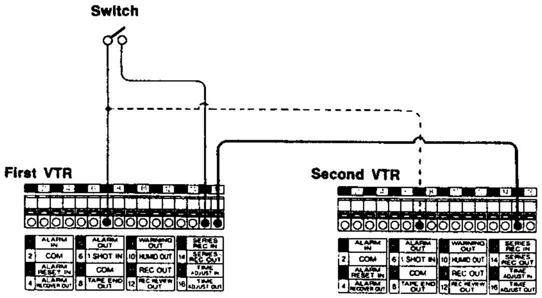
- Set "TIME ADJUST OPERATION" on menu screen 3 of this VTR to "MASTER."
- When this VTR is set to the time which was set by "TIME ADJUST SET TIME" on menu screen 3, pulses are output and all the other VTRs are set to the time.

- Setting this VTR's time using the external switch


4
6
8
10
12
14
16
1 ALARM IN
2 COM
3 ALARM RESET IN
4 ALARM RECOVER OUT
5 ALARM OUT
6 1 SHOT IN
7 COM
8 TAPE END OUT
9 WARNING OUT
10 HUMID OUT
11 REC OUT
12 REC REVIEW OUT
13 SERIES REC IN
14 SERIES REC OUT
15 TIME ADJUST IN
16 TIME ADJUST OUT
Switch

- Set "TIME ADJUST OPERATION" on menu screen 3 of this VTR to "SLAVE."
- When the TIME ADJUST IN terminal is connected to ground (COM) and short-circuited using an external switch, the time is set to what was set by "TIME ADJUST SET TIME" on menu screen 3.

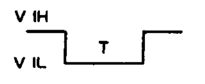
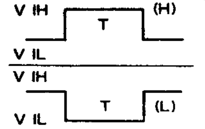
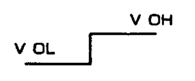
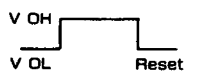
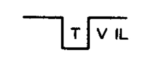
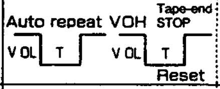
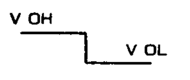
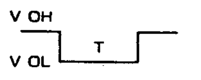
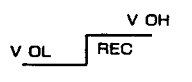
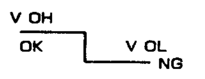
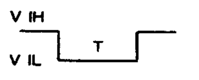
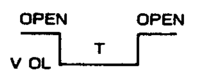
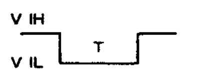
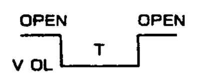
- Setting the time of several VTRs using the external switch


Switch
First VTR
Second VTR

- Set "TIME ADJUST OPERATION" on menu screen 3 of this VTR to "SLAVE."
- When the TIME ADJUST IN terminal is connected to ground (COM) and short-circuited using an external switch, the time is set to what was set by "TIME ADJUST SET TIME" on menu screen 3, and the other VTRs are also set to the time.

- Other time lapse recorders which can be connected to this unit are limited to Panasonic models equipped with time setting terminals.

Terminal Signal Levels

Name of terminal	Signal level		Remarks
Alarm input		V IL=0~0.6V T≧100mS	Ground input
Alarm reset input	 V IH (H) T V IL V IH T (L) V IL	V IH=4~5V V IL=0~0.6V T≧100mS	High/low input (H) or (L) can be selected on menu screen 4.
Alarm reset output		V OH=5±0.5V(200Ω) V OL=0~0.6V(Max.3mA)	High output
Alarm output	 V OH V OL Reset	V OH=11~13V(4700Ω) V OL=0~0.6V(Max.3mA)	High output
1-shot recording input		V IL=0~0.6V T≧100mS	Ground input
Tape-end output	 Auto repeat VOH Tape-end STOP V OL T V OL T Reset	V OH=11~13V(4700Ω) V OL=0~0.6V(Max.3mA) T=approx.2s	Ground output
Auto OFF output		V OH=11~13V(4700Ω) V OL=0~0.6V(Max.3mA)	Ground output
Dew output (model AG-6730 only)		V OH=4~5.5V(10KΩ) V OL=0~0.6V(Max.3mA)	Ground output
Recording output (model AG-6730 only)		V OH=11~13V(4700Ω) V OL=0~0.6V(Max.3mA)	High output
Recording check output (model AG-6730 only)	 V OH OK V OL NG	V OH=11~13V(4700Ω) V OL=0~0.6V(Max.3mA) OK when reset	Ground output
Series recording input (model AG-6730 only)		V IL=0~0.6V T≧100mS	Ground input
Series recording output (model AG-6730 only)	 OPEN OPEN T V OL	V OL=0~0.6V T≧approx.700mS	Ground output
Time set input (model AG-6730 only)		V IL=0~0.6V T≧100mS	Ground input
Time set output (model AG-6730 only)	 OPEN OPEN T V OL	V OL=0~0.6V T=approx.1s	Ground output

Other Functions

Power restoration recording

When there was a power failure during recording, the VTR is automatically set to the recording mode provided that the power is restored within one month.

- ■ Immediately after the power has failed, the VTR is set to the tape protection mode so as to protect the video heads and tape.
- ■ The VTR status established after the power is restored depends on the status established prior to the power failure and on the recording mode, as follows.

Status / Mode	Recording	Playback, stop, fast forward, rewind	Auto rewinding during auto repeat recording
Alarm	Recording	Stop	Recording after tape is rewound to its start
Internal timer	Resume the recording as per the settings of the internal timer.		
External timer	Recording	Recording	Recording after tape is rewound to its start

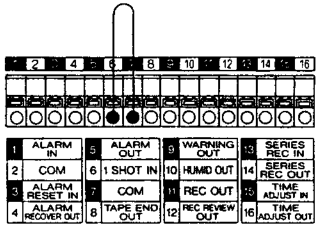
- ■ In the event of power failure lasting more than one month, recording will be forcibly started by the recorder in the 72H mode once the power has been restored if a tape has been loaded.

Automatic recording review function

This function conducts the recording review automatically when recording has been commenced from the stop mode.
First, recording is conducted for several seconds, and then what has been recorded is automatically reviewed. If, after a review of the recording, the proper video level was not achieved due to dirt on the heads or tape deterioration, the cassette mark (▭) flashes on the display tube and, at the same time, the automatic head cleaning operation is repeated 3 times. After this, recording is again conducted for several seconds, and then what has been recorded is automatically reviewed. If the result of the review is acceptable, the cassette mark stops flashing and the recording is commenced.
If the result of the review is not acceptable, the recording is commenced with the cassette mark still flashing. (See page 1-31)

Function setting method

Connect the 1-shot recording terminal to ground and short-circuit.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
1 ALARM IN
2 COM
3 ALARM RESET IN
4 ALARM RECOVER OUT
5 ALARM OUT
6 1 SHOT IN
7 COM
8 TAPE END OUT
9 WARNING OUT
10 HUMID OUT
11 REC OUT
12 REC REVIEW OUT
13 SERIES REC IN
14 SERIES REC OUT
15 TIME ADJUST IN
16 TIME ADJUST OUT

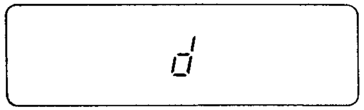
- ■ When the automatic recording review function is set, do not use the unit's 1-shot recording facility.

1-15. Error Codes

Dew ("d") Display

■ When dew forms inside the VTR, the "d" mark appears on the display.

Wait a few hours until the "d" mark is cleared before proceeding any further with operation.



"d" refers to the first letter of the word "dew."

Dew (or condensation) refers to the phenomenon whereby droplets of water form, for instance, on the window pane of a warm room in winter.

■ When dew has formed:
- "d" appears on the display.
- The VTR cannot be operated until "d" is cleared from the display. Wait until it is cleared.
- When dew forms with the power OFF, the power is automatically switched on and the "d" mark appears.
- If a cassette has been installed, it is ejected half-way.
- If a cassette has not been installed, one cannot be installed until "d" is cleared from the display.

■ When the dew status is released:
- The VTR is restored to the state where regular operation is possible.
- If a cassette was installed, it is set to the stop mode.
- If dew formed during recording, the VTR is reset to the recording mode after the dew status is released.

■ Take care even while dew is forming!
Dew normally forms gradually, and the "d" mark may not flash for the first 10 to 15 minutes of dew formation. If the room temperature or humidity has changed, wait 20 minutes or so before using the VTR.

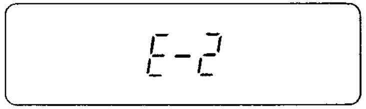
■ Conditions conductive to dew-forming
- When the VTR or cassette is moved from one location to another where the temperature or humidity is significantly different from the original location
- Where the humidity is high
- When the VTR or cassette is moved rapidly from a cool place to where the temperature or humidity is high
- A room immediately after it has been heated up

Error Display

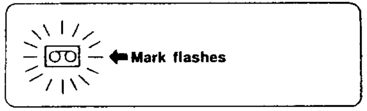
■ An error display appears on the display tube when a failure or malfunction has occurred in the unit. The error display indicated on the display denotes the nature of the failure or malfunction.

Take the remedial action described below.

■ Error codes



■ Cassette mark flashing error



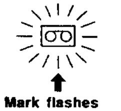
When a malfunction occurs in the VTR, an error code appears on its display.

■ When an error code appears:
- An error code appears on the display.
- All operations are shut down when an error code appears on the display.
- **If the error is not released even after taking the remedial action described below, switch off the power, disconnect the power cable from the power outlet, and contact your dealer immediately.**

■ List of error codes

Error code	Malfunction	Remedial action
E-2	Malfunction in elevator section	These errors may occur if the video cassette has not been loaded properly. Try switching the power off and turning it back on again.
E-3	Malfunction in loading section	
E-4	Malfunction in cylinder section	These errors may occur if there is something wrong with the state of the video cassette. Try switching the power off and turning it back on again and replacing the video cassette.
E-5	Malfunction in reel section	
E-6	Incorrect tape tension	
E-7	Malfunction in reel solenoid	Try switching the power off and turning it back on again.
E-8	Malfunction in audio recording circuitry	Try switching the power off and turning it back on again.

■ Cassette maık flashing error

 **Mark flashes**	The cassette mark (📼) on the display tube flashes if it was not possible for the proper video level to be obtained after the recording review operation due to dirt on the heads or deterioration of the tape. VTR operation can still be continued but be sure to clean the heads or replace the cassette tape.

1-16. Optional Accessories

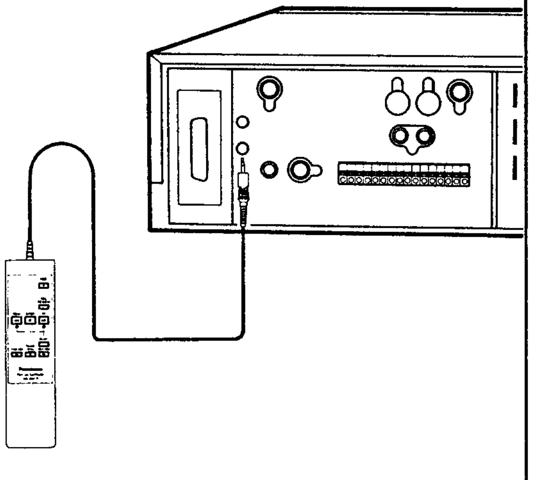
Optional Accessories

A variety of optional accessories are available to enable you to make the maximum use of this VTR's functions.

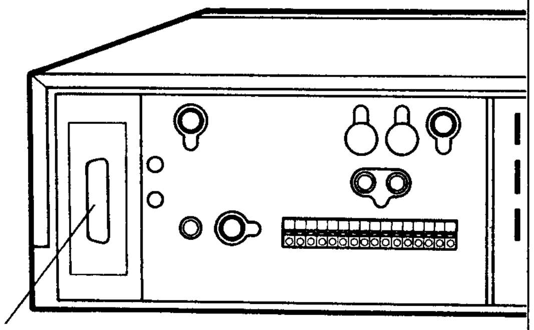
AG-A67 Remote Controller

This VTR can be operated by remote control instead of using its function buttons if the optional AG-A67 remote controller is connected to the remote connector on the VTR's rear panel.

- The functions which can be controlled using the AG-A67 remote controller are listed below:
  REC, REC REVIEW, REW, FF, PLAY, PAUSE/STILL, REV ADV, FWD ADV
- Do not connect headphones, etc. to the REMOTE control input connector.



AG-IA670 RS-232C Interface Adaptor

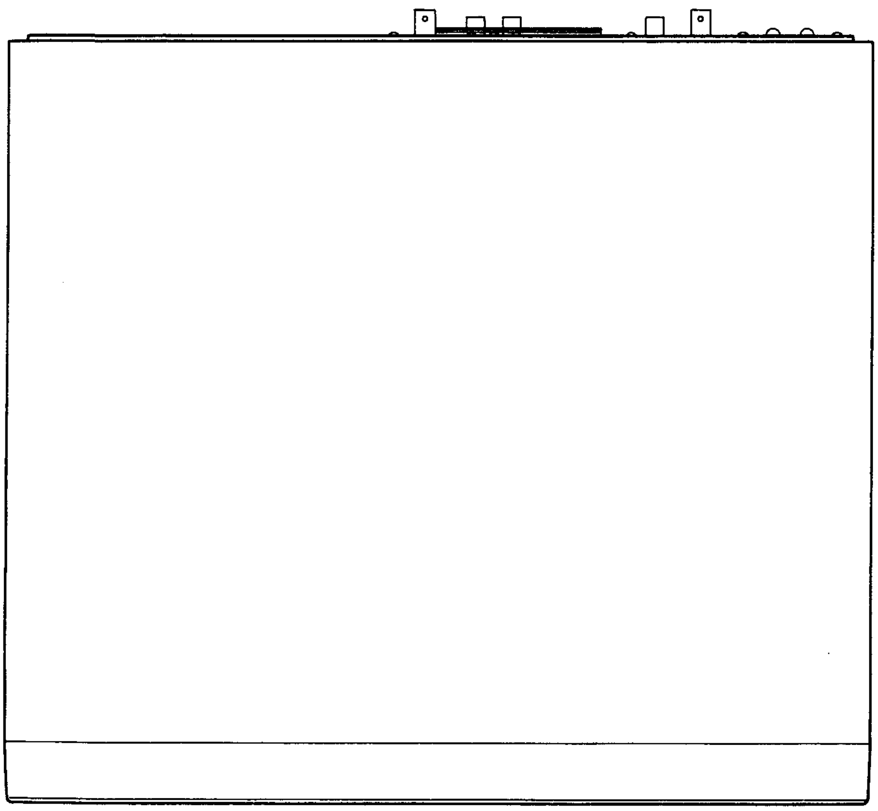


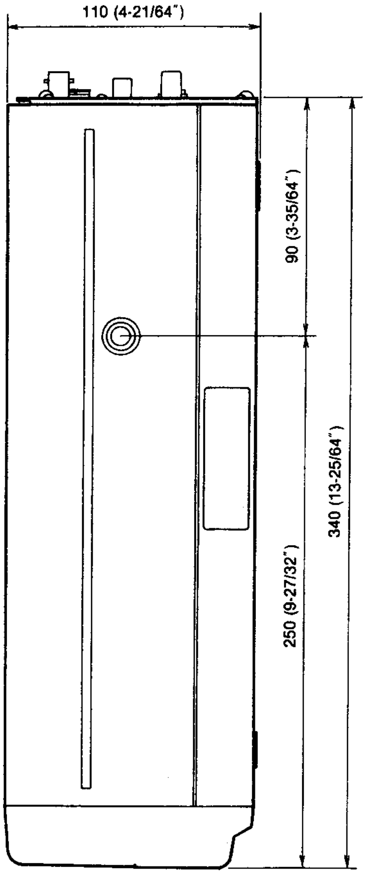
The functions listed below can be added by mounting the RS-232C interface board adaptor.

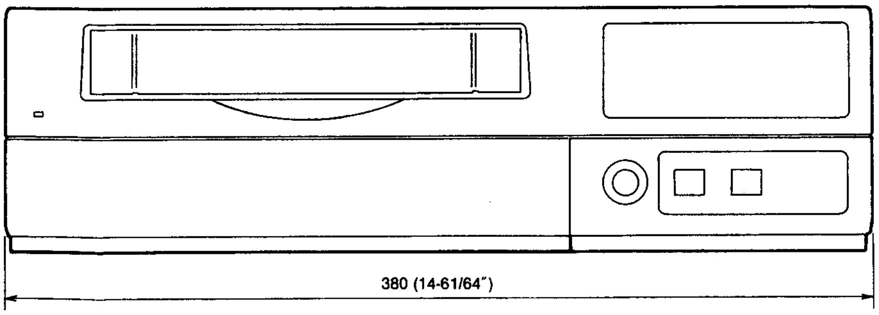
RS-232C communication functions
The VTR can be controlled using a personal computer. Menu screen 7 (RS-232C parameter settings) is added.

VITC time code recording/playback function
Time code signals can be recorded onto the tape. These come in handy for searches by locating absolute positions on the tape.
Menu screen 8 (time code settings) is added.

1-17. Dimensions




110 (4-21/64")
90 (3-35/64")
250 (9-27/32")
340 (13-25/64")



Unit: mm (inch)

Section 2

DISASSEMBLY PROCEDURES

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SCREWS 2-8

2-1. DISASSEMBLY FLOWCHART

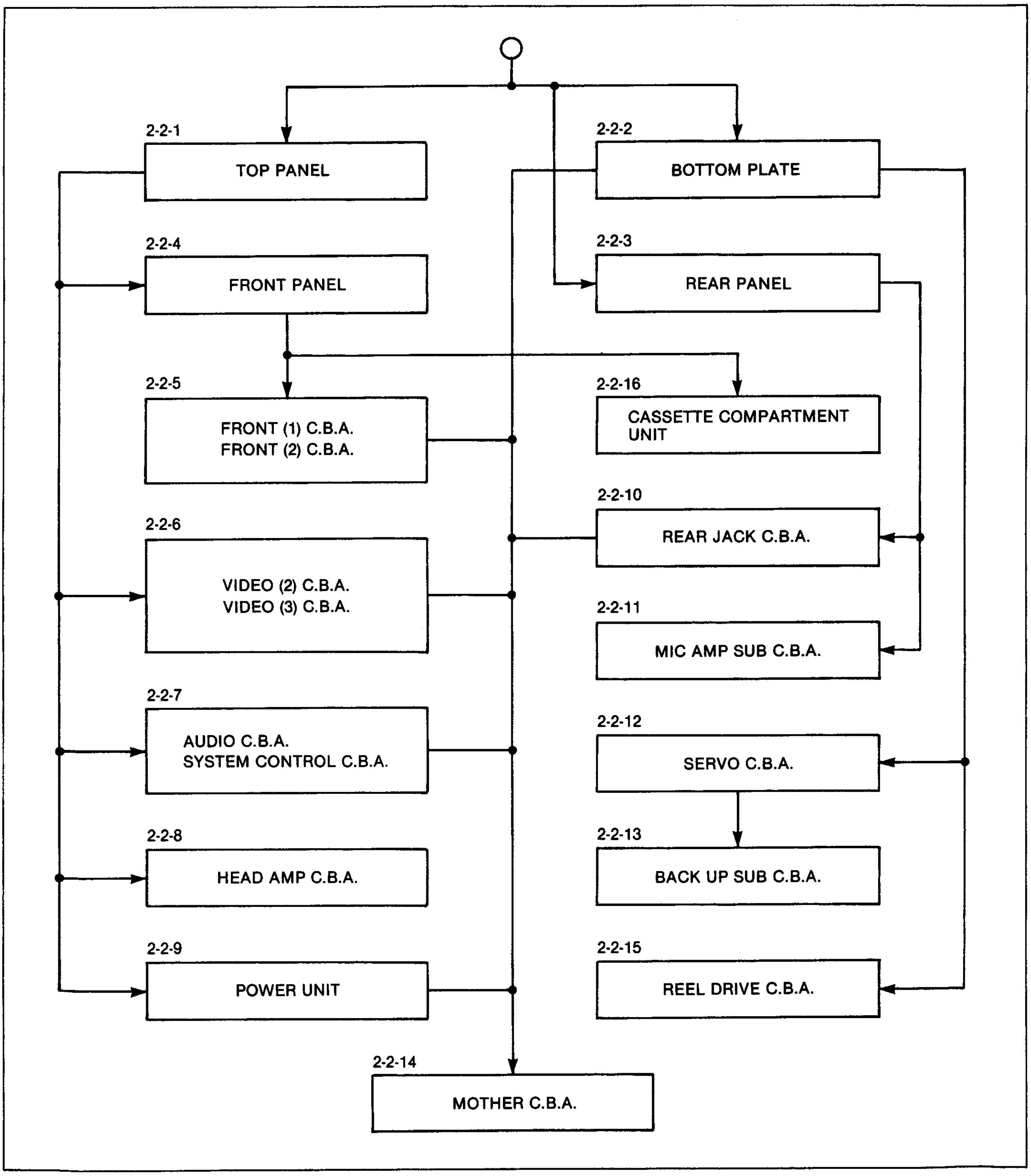

2-2-1
TOP PANEL
2-2-2
BOTTOM PLATE
2-2-4
FRONT PANEL
2-2-3
REAR PANEL
2-2-5
FRONT (1) C.B.A.
FRONT (2) C.B.A.
2-2-16
CASSETTE COMPARTMENT UNIT
2-2-10
REAR JACK C.B.A.
2-2-6
VIDEO (2) C.B.A.
VIDEO (3) C.B.A.
2-2-11
MIC AMP SUB C.B.A.
2-2-7
AUDIO C.B.A.
SYSTEM CONTROL C.B.A.
2-2-12
SERVO C.B.A.
2-2-8
HEAD AMP C.B.A.
2-2-13
BACK UP SUB C.B.A.
2-2-9
POWER UNIT
2-2-15
REEL DRIVE C.B.A.
2-2-14
MOTHER C.B.A.

Figure D1

The above flow chart describes the order of steps for removing the cabinet parts and certain printed circuit boards in order to gain access to the items needing servicing. To reassemble the unit, follow the steps in reverse order.

2-2. DETAILED DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

1. Unscrew the 2 screws (A) on both side of the Top Panel (Figure D2).
2. Careful lift the rear of the case and side it off the back of the unit.

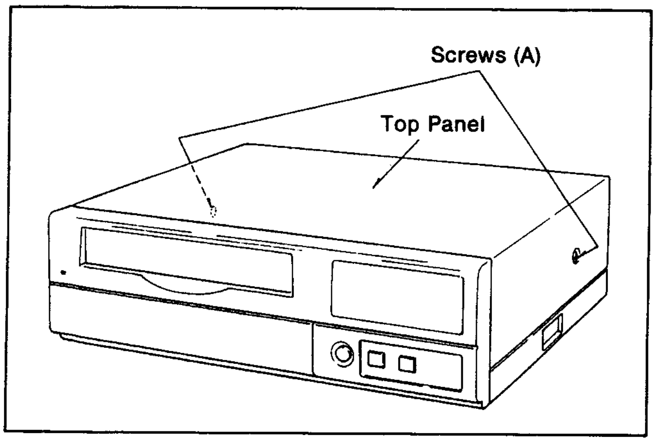

Screws (A)
Top Panel

Figure D2

2-2-2. Removal of the Bottom Plate

1. Unscrew the 7 screws (B) on the Bottom Plate. (Figure D3).
2. Lift the Bottom Plate.

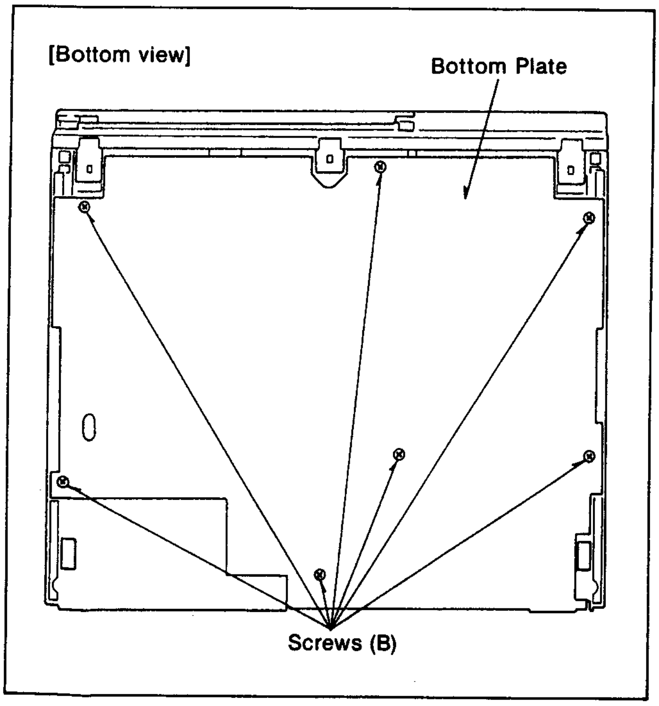

[Bottom view]
Bottom Plate
Screws (B)

Figure D3

2-2-3. Removal of the Rear Panel

1. Unscrew the 4 screws (C) on the Rear Panel (Figure D4).
2. Lift the Rear Panel and carefully pull the panel off from the unit (with taking care for the connection to the Mother C.B.A. at the lower edge on the Rear Jack C.B.A.)

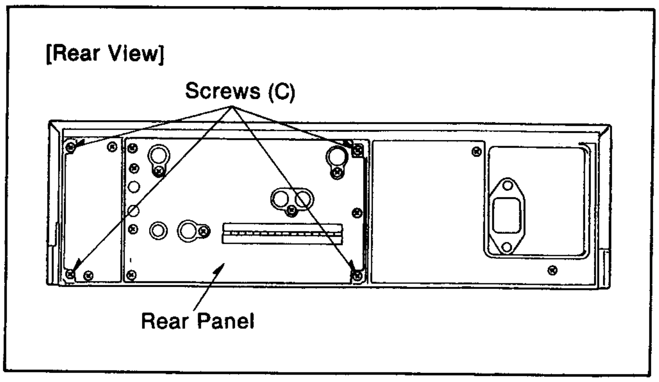

[Rear View]
Screws (C)
Rear Panel

Figure D4

2-2-4. Removal of the Front Panel

1. Unscrew the 3 screws (D) on the top of the Front Panel (Figure D5).
2. Unlock the 3 locking tabs (E) on the top of the Front Panel and the 3 locking tabs (F) on the bottom of Front Panel (Figure D5 and Figure D6).
3. Lift the Front Panel.

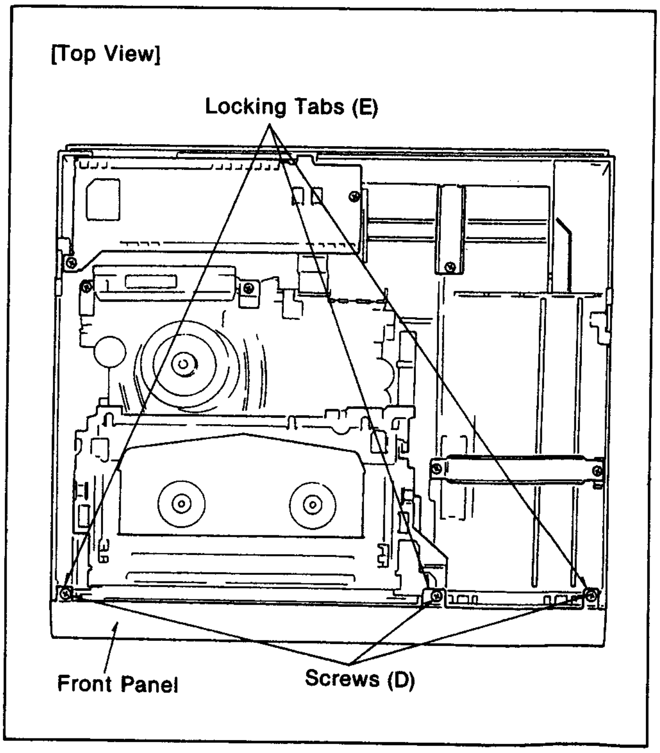

[Top View]
Locking Tabs (E)
Front Panel
Screws (D)

Figure D5

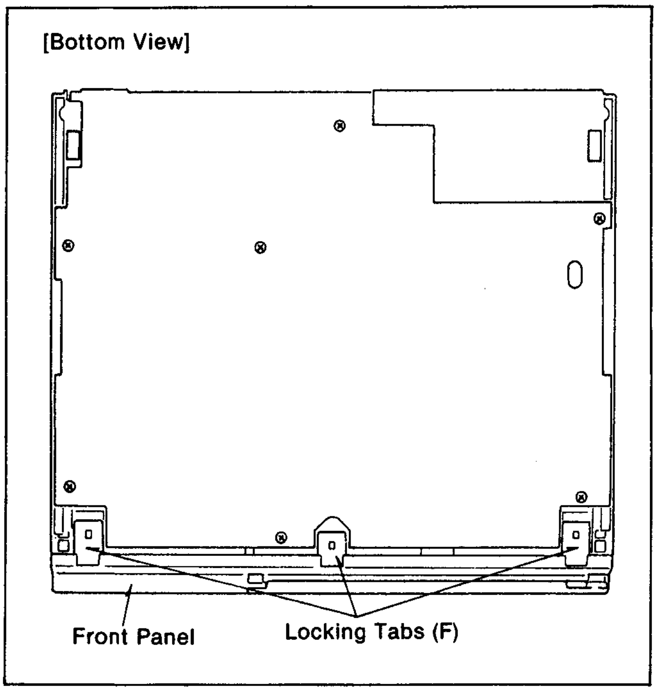

[Bottom View]
Front Panel
Locking Tabs (F)

Figure D6

2-2-5. Removal of the Front (1) and Front (2) C.B.A.

1. Unscrew the 7 screws (G) on the Front Panel (1) C.B.A. and Front Panel (2) C.B.A. together (Figure D7).
2. Carefully unlock the 2 locking tabs (H1) on the top of the Front Panel (1) C.B.A. and a locking tab (H2) on the bottom of the Front Panel (2) C.B.A. (Figure D7).
3. Carefully pull the Front Panel (1) and (2) forward and disconnect the connectors (I).
4. To separate the Front Panel (1) and Front Panel (2), disconnect the connector (J) carefully.

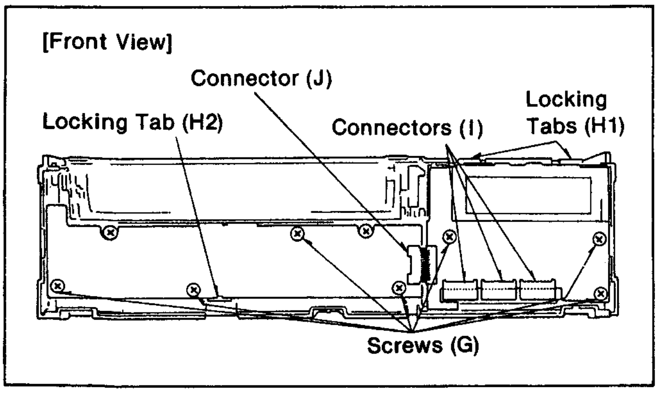

[Front View]
Connector (J)
Locking Tab (H2)
Connectors (I)
Locking Tabs (H1)
Screws (G)

Figure D7

2-2-6. Removal of the Video (2) and Video (3) C.B.A.

1. Unscrew 2 screws (K) and remove the C.B. Holder (Figure D8).
2. Carefully lift up the each C.B.A.

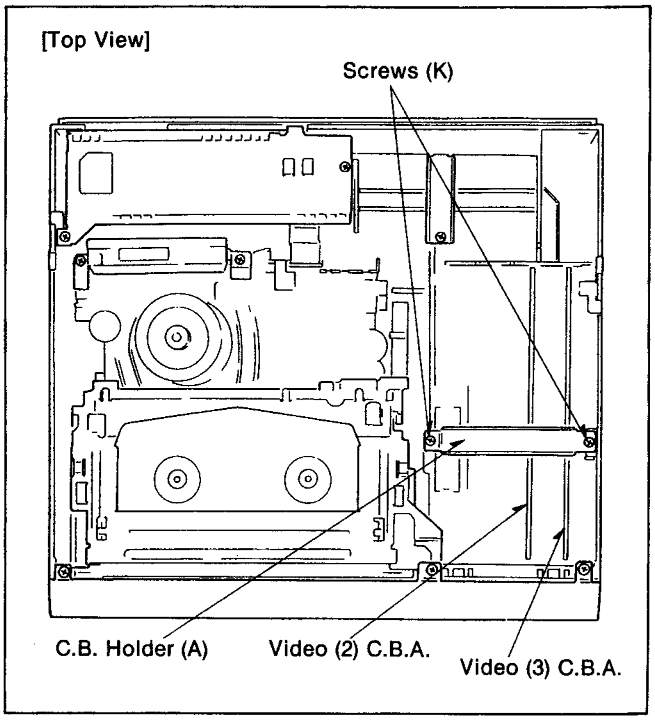

[Top View]
Screws (K)
C.B. Holder (A)
Video (2) C.B.A.
Video (3) C.B.A.

Figure D8

2-2-7. Removal of the System Control C.B.A. and the Audio C.B.A.

1. Unscrew a screw (L) and remove the C.B. Holder (B) (Figure D9).
2. Carefully lift the each C.B.A. upward.

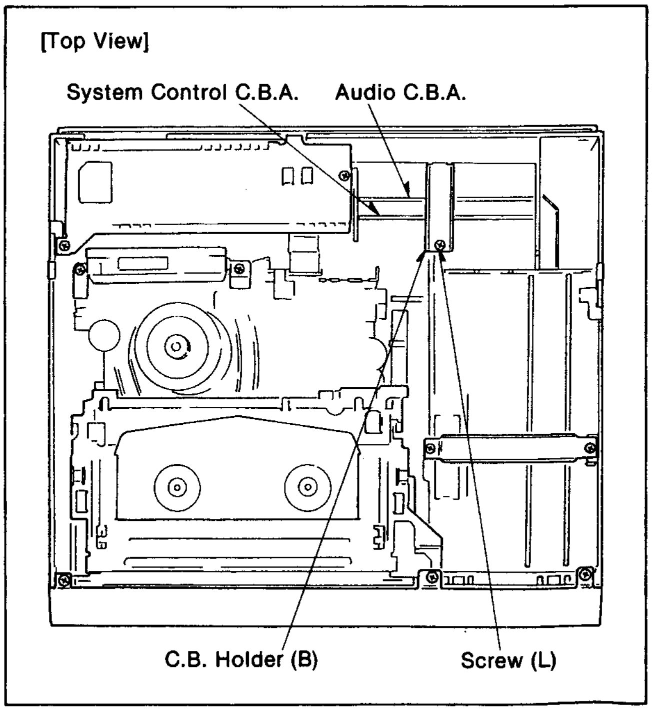

[Top View]
System Control C.B.A.
Audio C.B.A.
C.B. Holder (B)
Screw (L)

Figure D9

2-2-8. Removal of the Head Amp.

1. Unscrew the 2 screws (M) on the Head Amp C.B.A. (Figure D10).
2. Pull out the Head Amp.

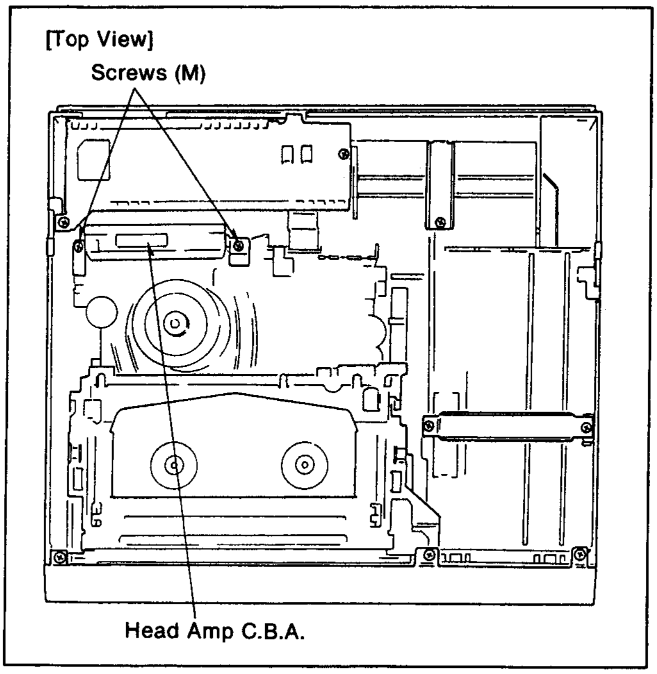

[Top View]
Screws (M)
Head Amp C.B.A.

Figure D10

2-2-9. Removal of the Power Unit

1. Unscrew the 2 screws (N-1, N-2) on the Power Unit (Figure D11).
2. Unscrew a screw (N-3) on the Power Unit and remove the GND lug terminal.
3. Unscrew the 3 screws (O) on the rear side (Figure D12).
4. Pull out the Power Unit.

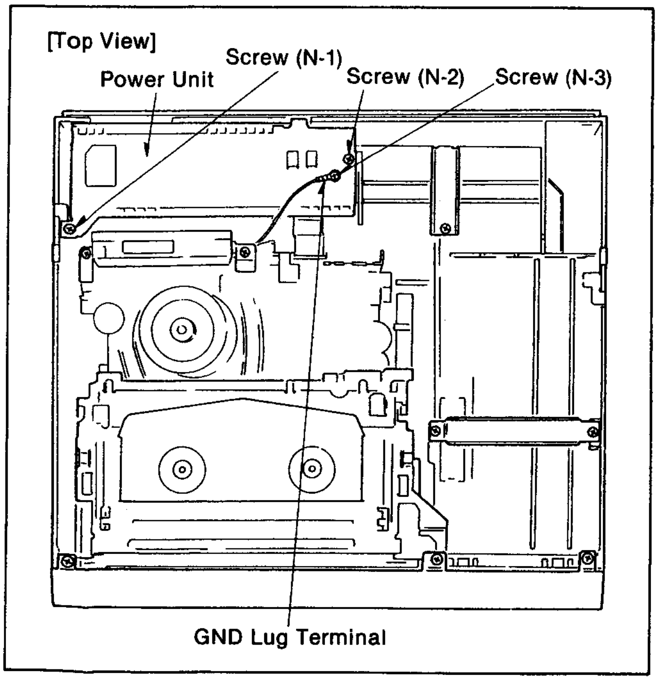

[Top View]
Screw (N-1)
Power Unit
Screw (N-2)
Screw (N-3)
GND Lug Terminal

Figure D11

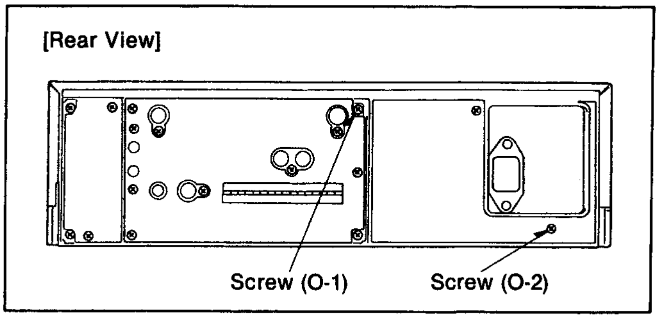

[Rear View]
Screw (O-1)
Screw (O-2)

Figure D12

2-2-10. Removal of the Rear Hack C.B.A.

1. Unscrew the 6 screws (P-1, P-2) on the Rear Panel (Figure D13).
2. Unscrew the 2 screws (Q) on the Rear Jack C.B.A. (Figure D14).
3. Remove the Rear Jack C.B.A.

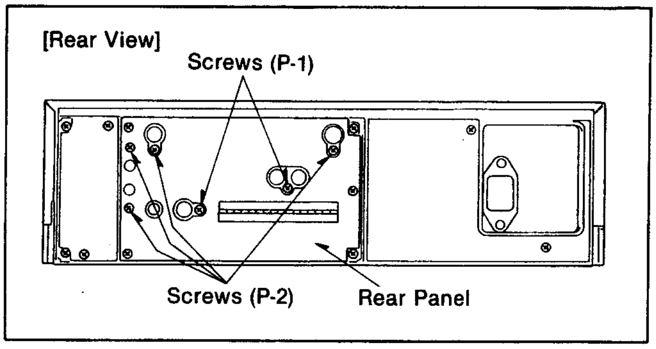

[Rear View]
Screws (P-1)
Screws (P-2)
Rear Panel

Figure D13

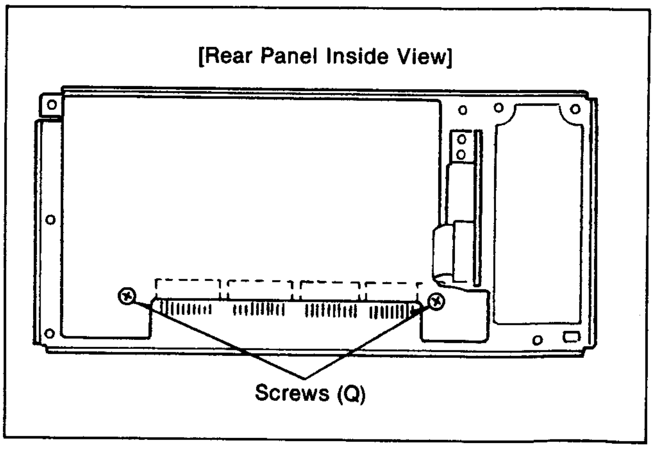

[Rear Panel Inside View]
Screws (Q)

Figure D14

2-2-11. Removal of the Mic Amp Sub C.B.A.

1. Unscrew the 2 screws (R) on the Mic Amp Sub C.B.A. (Figure D15).
2. Remove the Mic Amp Sub C.B.A.

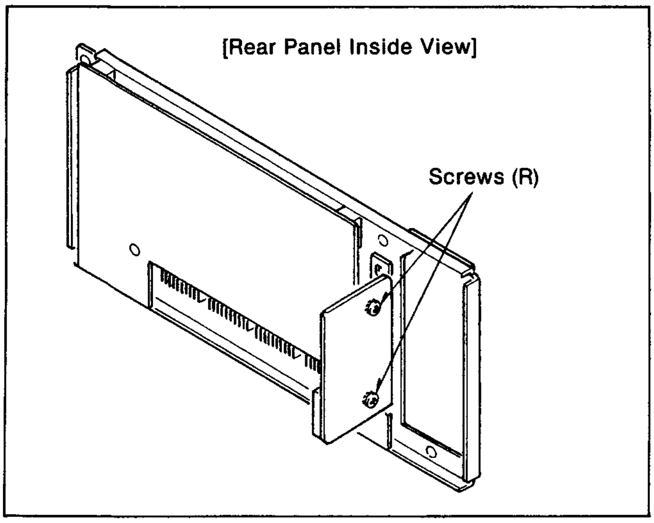

[Rear Panel Inside View]
Screws (R)

Figure D15

2-2-12. Removal of the Servo C.B.A.

1. Unscrew the 2 screws (S) on the Servo C.B.A. (Figure D16).
2. Open the Servo C.B.A. (Figure D17).
3. Disconnect a Flexible Cable (P2302) and the connectors (P2004, P2005, P2006 and P2301).
4. Close the Servo C.B.A. and then disconnect the 3 flexible cables (P2001, P2002 and P2003) and the 2 servo C.B.A. clamps (T).
5. Remove the Servo C.B.A.

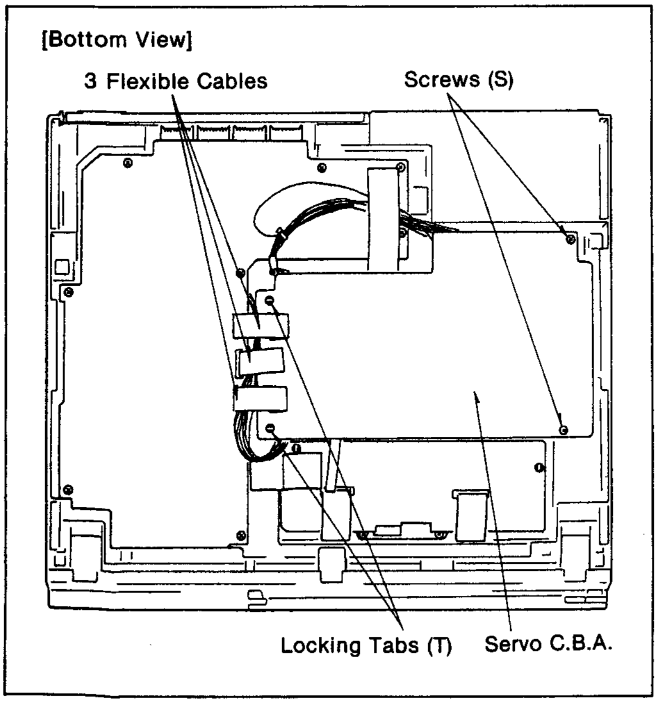

[Bottom View]
3 Flexible Cables
Screws (S)
Locking Tabs (T)
Servo C.B.A.

Figure D16

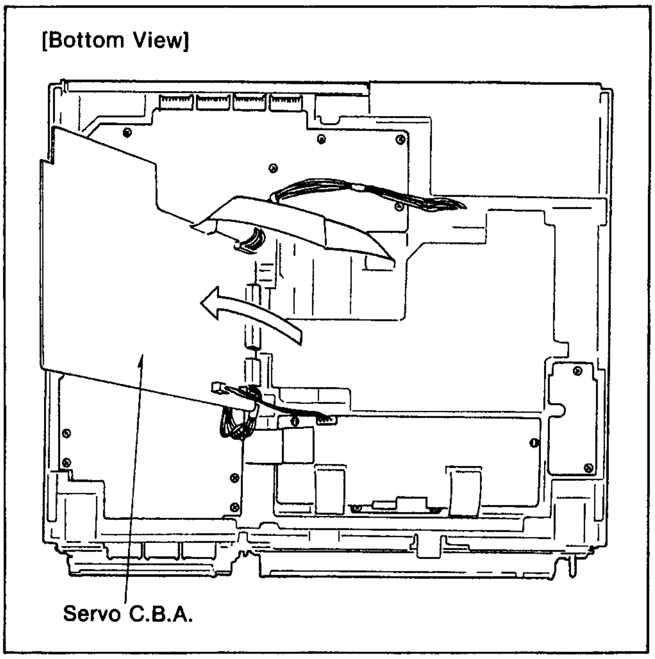

[Bottom View]
Servo C.B.A.

Figure D17

2-2-13. Removal of the Back Up Sub C.B.A.

1. Unscrew 2 screws (U) on the Back Up C.B.A. (Figure D18).
2. Lift the Back Up Sub C.B.A. out.

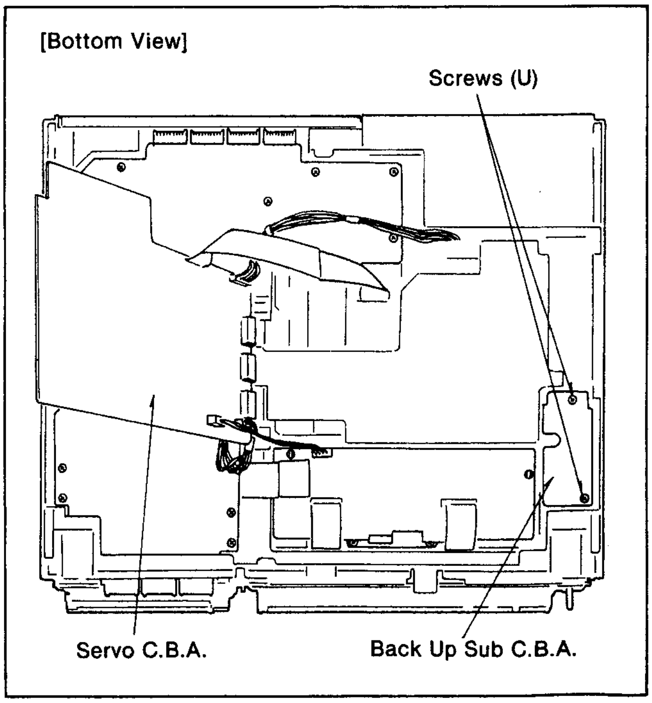

[Bottom View]
Screws (U)
Servo C.B.A.
Back Up Sub C.B.A.

Figure D18

2-2-14. Removal of the Mother C.B.A.

Note: Before removing the Mother C.B.A., be sure to remove the Power Unit, Front(1) and (2) C.B.A., Rear Jack C.B.A. Video (1), (2) and (3) C.B.A., Reel Servo and Syscon C.B.A. and Audio C.B.A.

1. Unscrew the 8 screws (V) on the Mother C.B.A. (Figure D19).
2. Disconnect the 4 Flexible Cable (P921, P922, P923, P924) from the Mother C.B.A.
3. Lift the Mother C.B.A. and then disconnect a flexible cable (P901) and the 2 connectors (P902 and P925).
4. Removal the Mother C.B.A.

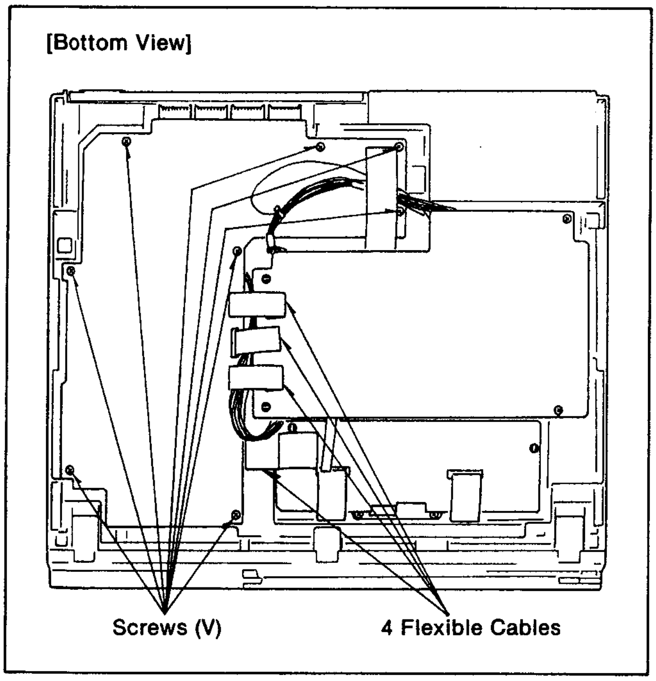

[Bottom View]
Screws (V)
4 Flexible Cables

Figure D19

2-2-15. Removal of the Reel Drive C.B.A.

1. Unlock the 2 clamps (W) on the Reel Drive C.B.A. (Figure D20).
2. Disconnect the 3 Flexible Cable (P2701, P2704 and P2705) and a connector (P2702).
3. Unsolder a connector (P2703) and then lift the Reel Drive C.B.A.

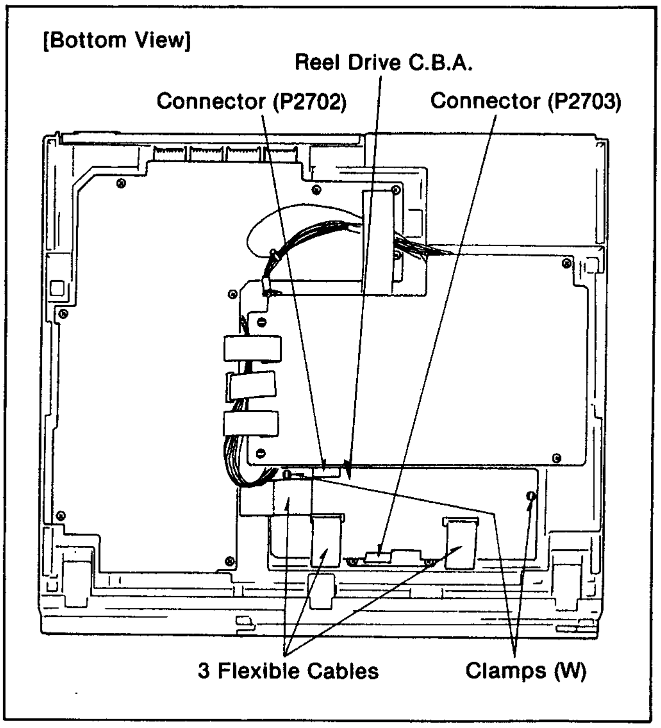

[Bottom View]
Reel Drive C.B.A.
Connector (P2702)
Connector (P2703)
3 Flexible Cables
Clamps (W)

Figure D20

2-2-16. Removal of the Cassette Compartment Unit

1. Unscrew the 2 screws (X-1) and a screw (X-2)(Figure D21).
2. Disconnect 2 wires and 4 wires from P1508 on the right side of the Cassette Compartment Unit (Figure D21).
3. Remove the Top Plate.

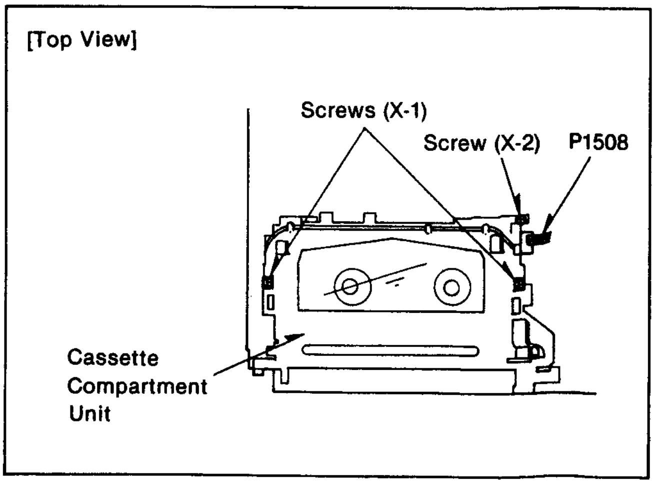

[Top View]
Screws (X-1)
Screw (X-2)
P1508
Cassette Compartment Unit

Figure D21

4. Remove a cassette holder unit.

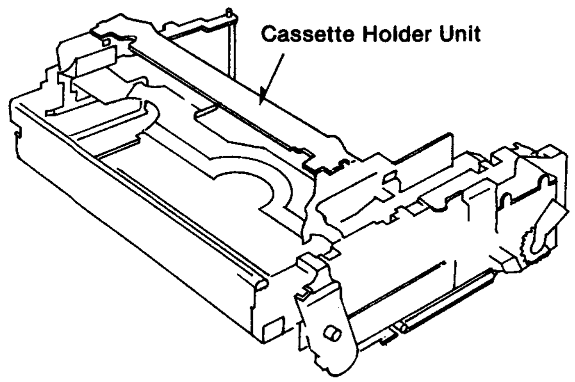

Cassette Holder Unit

Figure D22

5. Unscrew the 4 screws (Y) and remove the Cassette Compartment Unit.

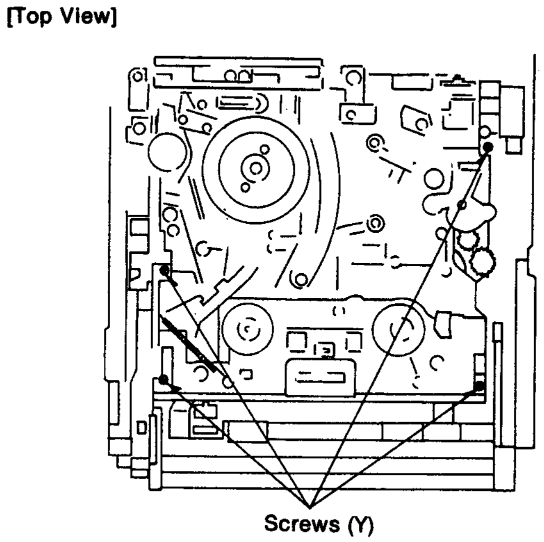
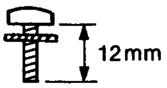
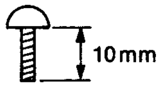
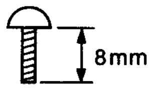
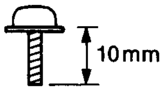
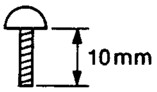
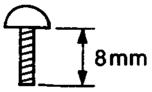
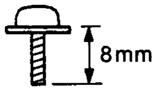
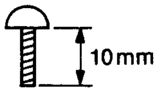
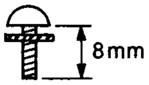
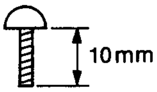
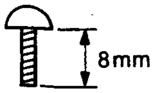
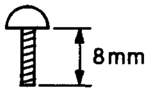
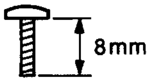
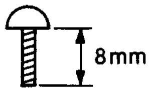
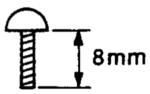

[Top View]
Screws (Y)

Figure D23

Note: When installing the Cassette Compartment Unit, refer to Mechanical Adjustment Procedures.

SCREWS

(A)  VHD0426 (SILVER)	(B)  XTV3+10G (GOLD)	(C), (O-1), (P-2),  XTV3+8FFZ (BLACK)	(D)  XTW3+10PR (RED)	(G)  XTV4+10JR (RED)
(K), (L), (N-1)  XTV3+8FR (RED)	(M)  XTW3+8LR (RED)	(N-2), (S), (U), (V)  XTV3+10GR (RED)	(N-3), (R)  XYE3+EF8 (GOLD)	(O-2)  XTV3+10FFZ (BLACK)
(P-1)  XTV3+8GFZ (BLACK)	(Q)  XTV3+8F (GOLD)	(X-1)  XTB3+8G (GOLD)	(X-2)  XTV3+8G (GOLD)	(Y)  XTV26+8FR (RED)

Section 3

MAINTENANCE

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3-1. REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated piece of equipment. It contains many belts, rollers, heads etc., which become worn, and deteriorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. long use times, to poor environmental conditions may adversely affect the life-span and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs. Please note that the recommended maintenance schedule depends on temperature and humidity.

3-2. MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine by using the Time Lapse mode.

Ref. No. in P/L	Parts Name	Hour								Ref. No. in P/L	Parts Name	Hour							
		500	1000	2000	3000	4000	5000	6000	10000			500	1000	2000	3000	4000	5000	6000	10000
——	Tape Transporters	●	●	●	●	●	●	●	●	1-48	Inclined Base (S)(2) U								■
1-19	A/C Head (1) U	●	●	●	●	●	●	●	○	1-45	Inclined Base (T)(1) U								■
1-56	FE Head	●	●	●	●	●	●	●	○	1-66	Head Cleaning U		○	○	○	○	○	○	○
1-41	Upper Cylinder U	●	○	○	○	○	○	○	○	1-36	Mode SW						○		○
1-42	Lower Cylinder U	●	○	○	○	○	○	○	○	2-8	Stator Base						○		○
——	Capstan Shaft	●	●	●	●	●	●	●	*1○	2-24	Reel Table U (S)						○		○
1-24	Housing Unit								○	2-23	Reel Table U (T)						○		○
1-22	Thrust Screw								○	2-39	Loading Cam Gear								■
1-23	Oil Seal								○	2-33	Main Cam Gear								■
2-28	Capstan Rotor Unit								○	2-1	Worm Shaft								■
1-25	Pressure Roller U	●	●	○	●	○	●	○	○	2-3	Worm Wheel								■
2-2	Loading Belt			○		○		○	○	——	P5 Shaft								■
1-7	Loading Motor U								○	BAT2991	Battery	Approx. 2 years							

*1: Reprace the Capstan Rotor Unit

Symbol	Maintenance	Requirement	Remark
●	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may acceleratedeterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
○	Replacement	———	
■	Greasing	Molytone Grease (Mor265)	Wipe the old grease and apply new grease.

3-3. PARTS LOCATION

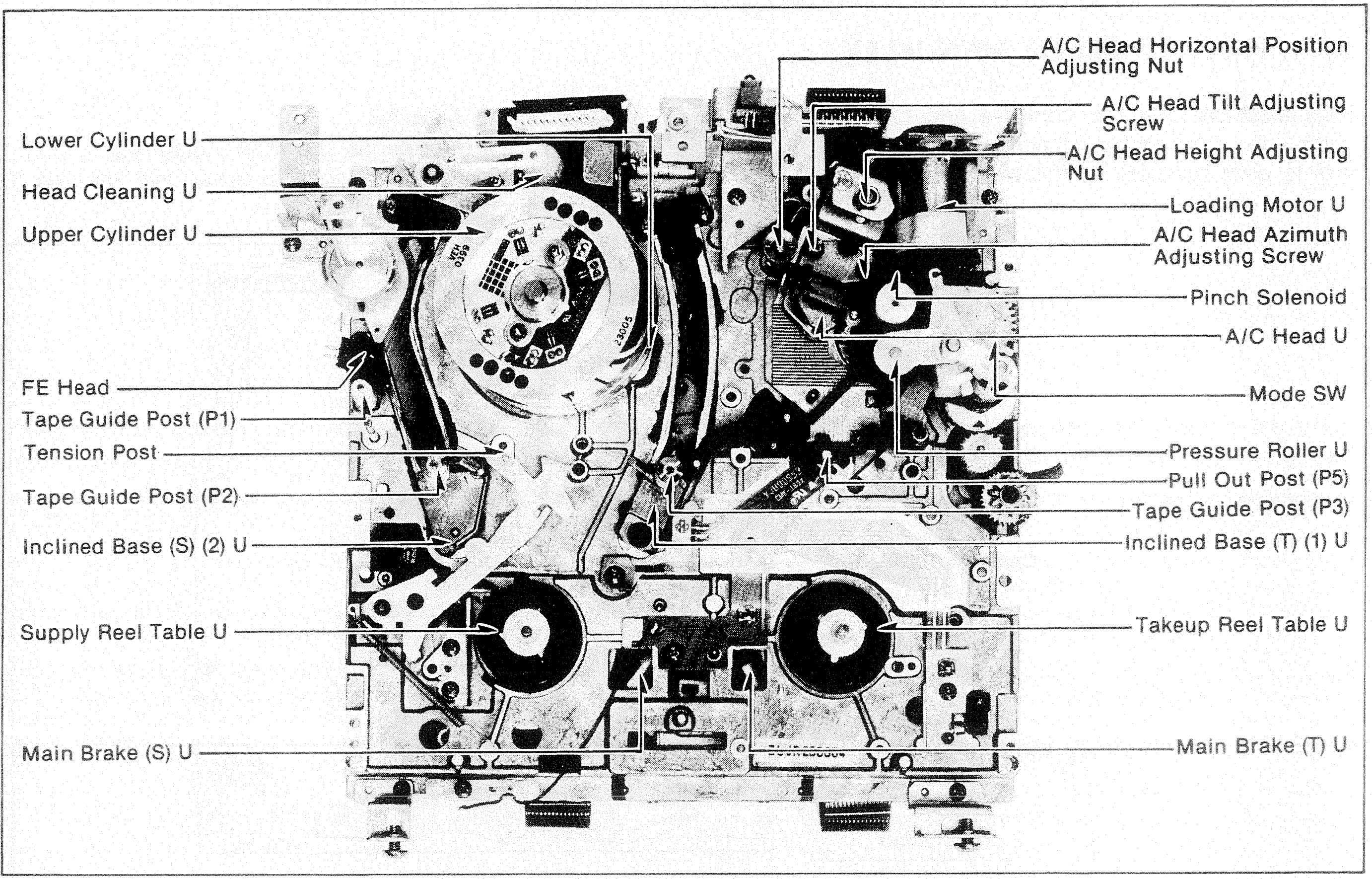
A/C Head Horizontal Position Adjusting Nut
A/C Head Tilt Adjusting Screw
A/C Head Height Adjusting Nut
Lower Cylinder U
Head Cleaning U
Upper Cylinder U
Loading Motor U
A/C Head Azimuth Adjusting Screw
Pinch Solenoid
A/C Head U
FE Head
Tape Guide Post (P1)
Mode SW
Tension Post
Pressure Roller U
Pull Out Post (P5)
Tape Guide Post (P2)
Tape Guide Post (P3)
Inclined Base (S) (2) U
Inclined Base (T) (1) U
Supply Reel Table U
Takeup Reel Table U
Main Brake (S) U
Main Brake (T) U

Figure 3-1 Top View

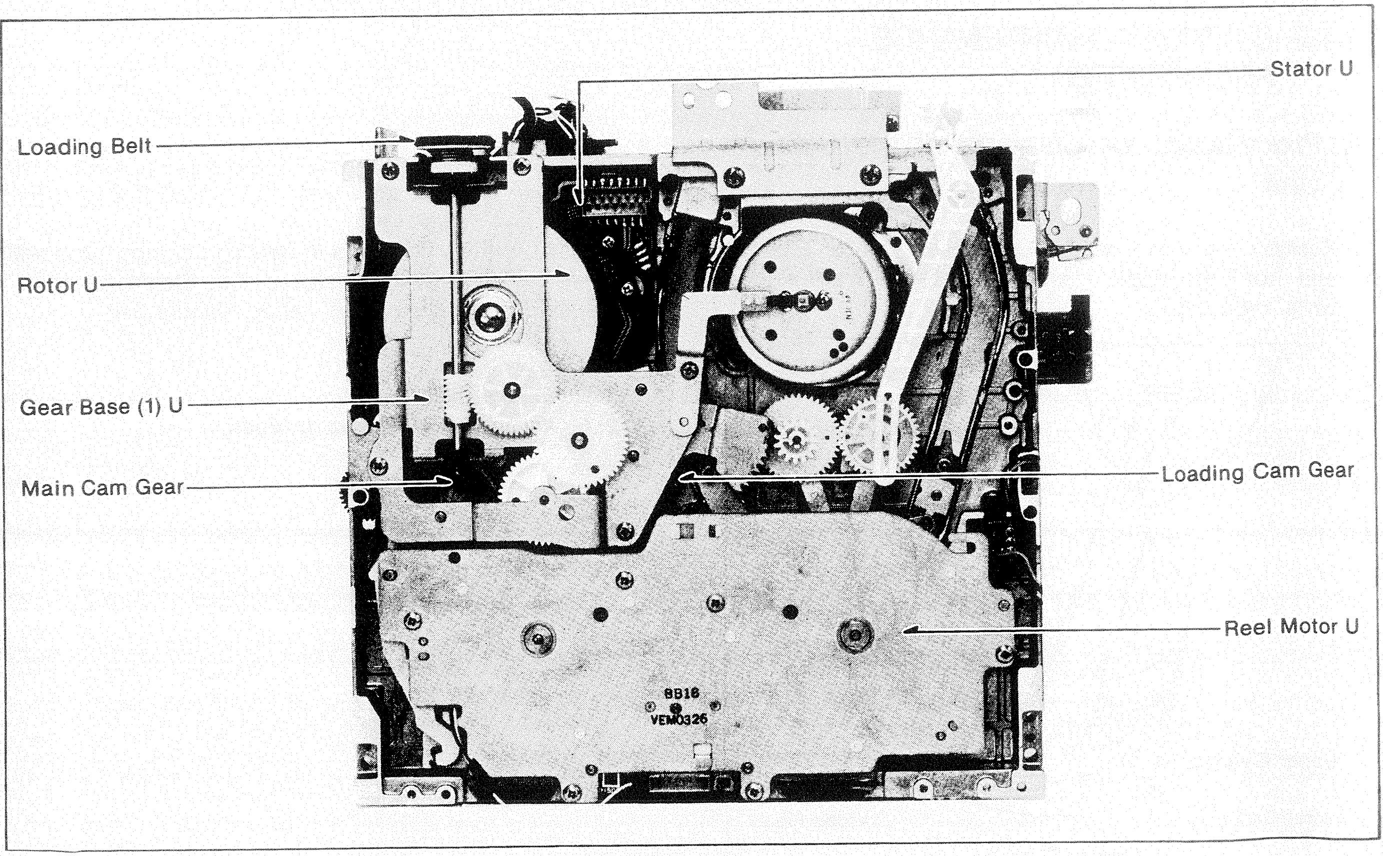
Stator U
Loading Belt
Rotor U
Gear Base (1) U
Main Cam Gear
Loading Cam Gear
Reel Motor U

Figure 3-2 Bottom View

3-4. MAINTENANCE PROCEDURES

3-4-1. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading dont work properly, it is possible to eject manually as follows.

1. Take out the Main AC.
2. Release the direction as shown in Figure 3-3.
3. Rotate the Wormshaft to clockwise until cassette is ejected.

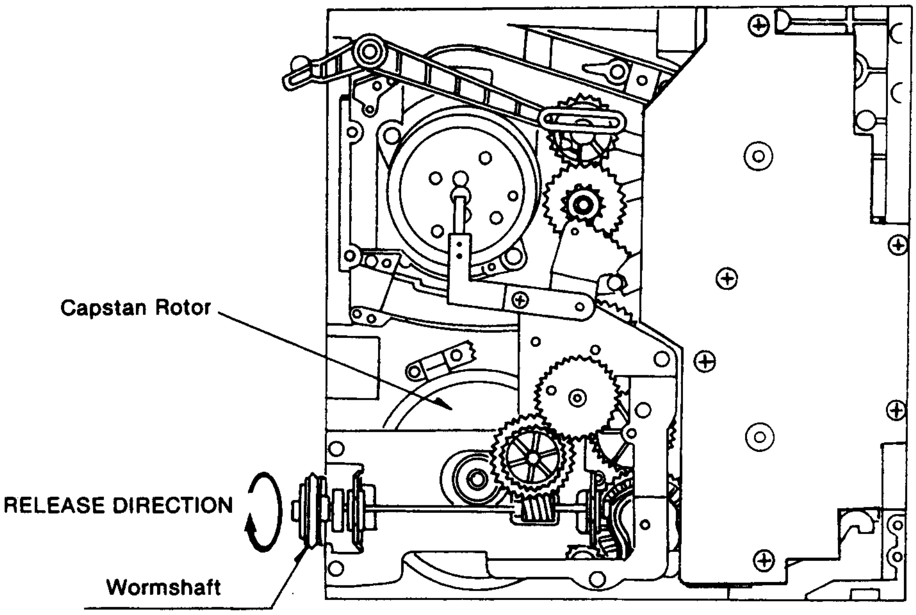
Capstan Rotor
RELEASE DIRECTION
Wormshaft

Figure 3-3

3-4-2. CYLINDER MAINTENANCE PROCEDURES

A. Procedures for Cleaning of the Cylinder Unit

1. Position the video head to permit access for cleaning and hold the upper cylinder to keep it from turning while cleaning.

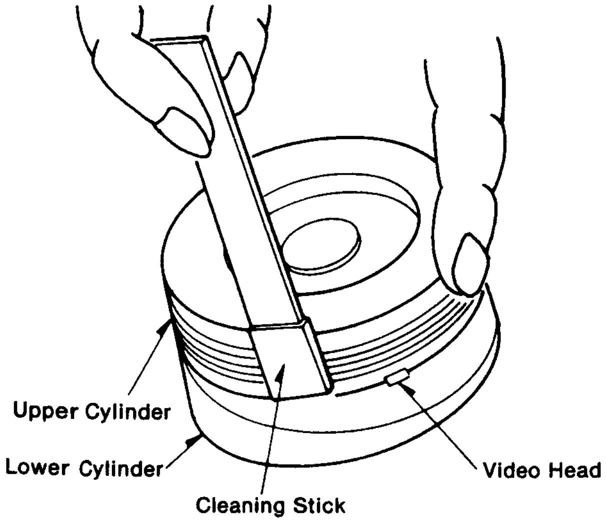
Upper Cylinder
Lower Cylinder
Video Head
Cleaning Stick

Figure 3-4

2. Gently rub the video head in direction of tape travel with Head Cleaning Stick moistened with Cleaning Liquid.
3. Repeat for the other video heads. (Figure 3-4)

<<NOTES>>

1. Do not rub vertically.
2. Do not apply any pressure to heads.

B. Replacement of the Upper Cylinder Unit

1. First remove two screws as shown in Figure 3-5. Then unsolder 8 (Figure 3-6) of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

<<NOTE>>

Soldered portion can be easily removed by using solder sucking wire, etc.

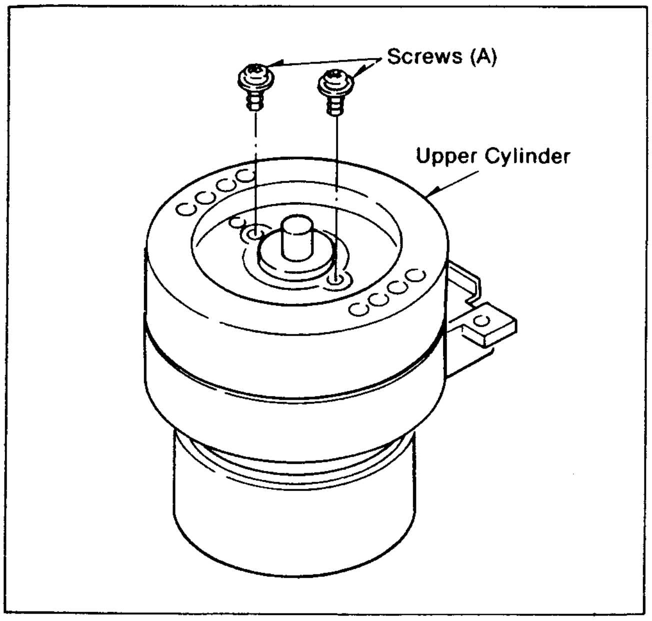
Screws (A)
Upper Cylinder

Figure 3-5

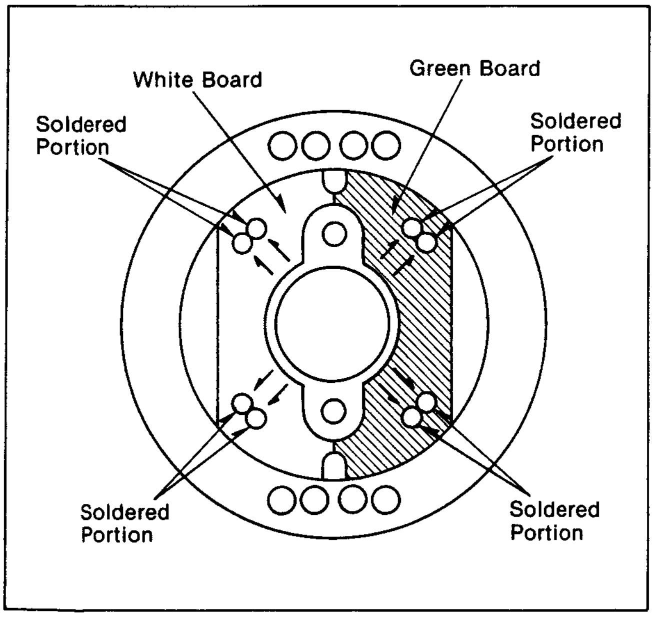
White Board
Green Board
Soldered Portion
Soldered Portion
Soldered Portion
Soldered Portion

Figure 3-6

2. The Upper Cylinder unit can be reinstalled by reversing the removal procedure. However, when Upper Cylinder is installed, be extremely carefully so that white portion of P.C. board of Upper Cylinder correctly matches the white portion of bottom cylinder as shown in Figure 3-7.

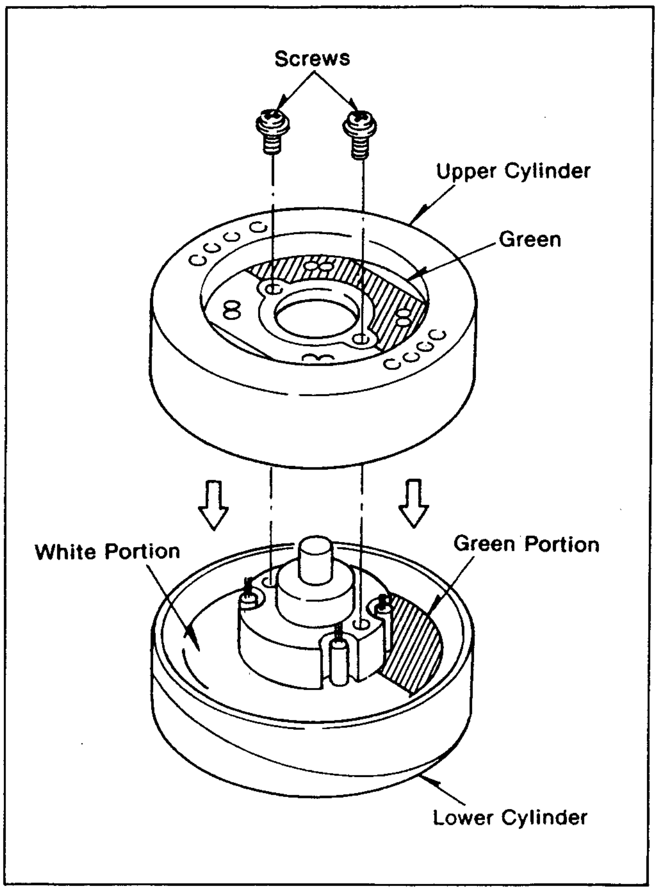
Screws
Upper Cylinder
Green
White Portion
Green Portion
Lower Cylinder

Figure 3-7

<<NOTE>>

If the Upper Cylinder Unit is reversal installed, no color will appear when playing back pre-recorded tapes.

C. Replacement of the Lower Cylinder Unit

1. Disconnect 2 connectors from the Head Amp Unit.
2. Unscrew 2 screws and remove the Head Amp Unit.
3. Remove the Cleaning Rod from bottom side.
4. Disconnect a connector (D)(Figure 3-8).
5. Unscrew 3 screws (C)(Figure 3-8). Since there is very little clearance between DD Cylinder (Lower Cylinder) Unit and Chassis, remove the Cylinder gently and carefully. (Figure 3-8).

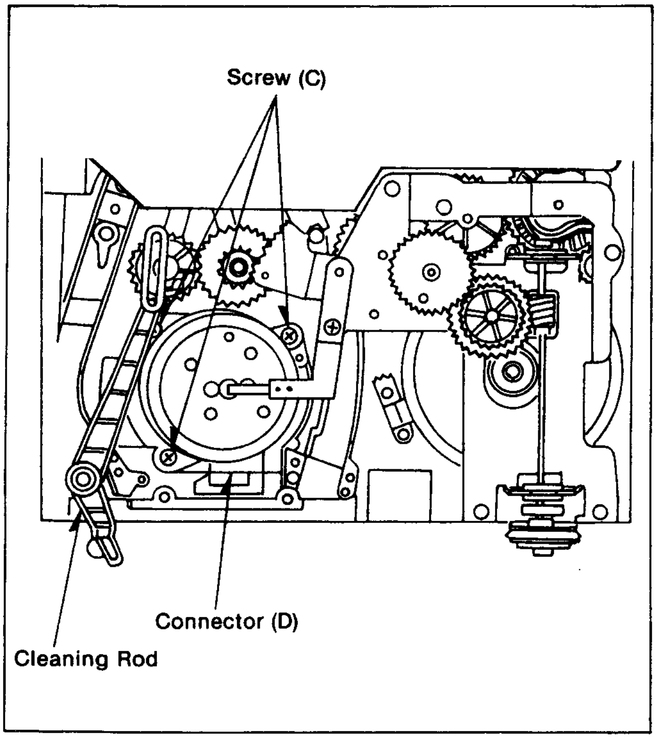
Screw (C)
Connector (D)
Cleaning Rod

Figure 3-8

6. Reinstall the new DD Cylinder (Lower Cylinder) Unit in the chassis, tighten the 3 screws (C). Then connect a connectors and reinstall the Cleaning Rod.
7. Re-install the Head Amp C.B.A.

D. Adjustment After Re-Installing

Figure 3-9 shows the order of steps for adjusting the mechanical and electrical.

These adjustments should be performed after completion of reinstalling the Upper Cylinder or Lower Cylinder Unit.

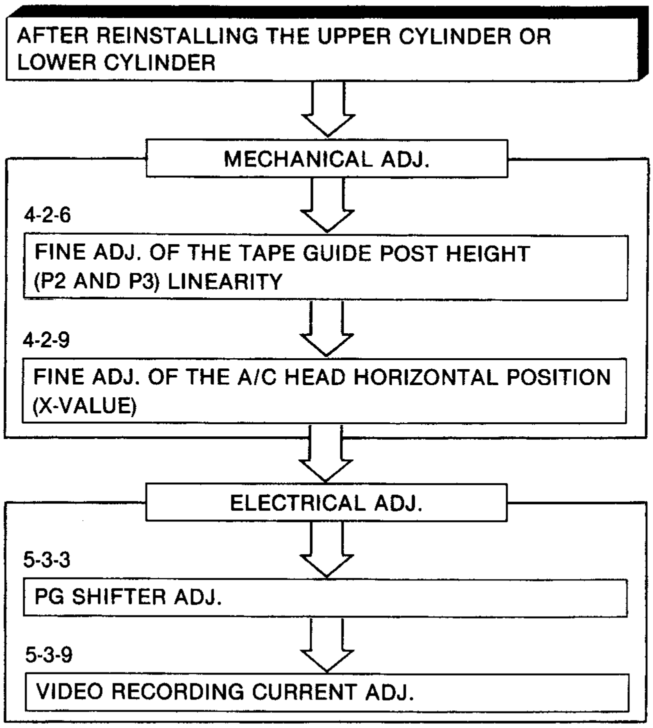
AFTER REINSTALLING THE UPPER CYLINDER OR LOWER CYLINDER
MECHANICAL ADJ.
4-2-6
FINE ADJ. OF THE TAPE GUIDE POST HEIGHT (P2 AND P3) LINEARITY
4-2-9
FINE ADJ. OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
ELECTRICAL ADJ.
5-3-3
PG SHIFTER ADJ.
5-3-9
VIDEO RECORDING CURRENT ADJ.

Figure 3-9

3-4-3. A/C HEAD MAINTENANCE PROCEDURES

A. Replacement of the A/C Head (1) Unit

1. Disconnect a connector (H). (Figure 3-10)
2. Unscrew 3 screws (E)(F)(G) with a spring and then remove the A/C Head (1) Unit (Figure 3-10).

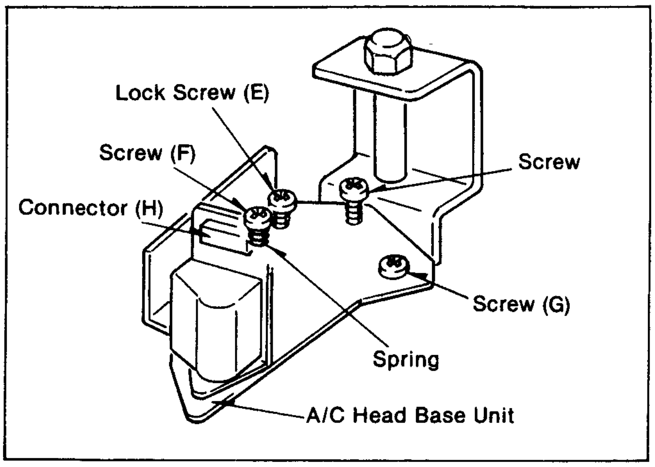
Lock Screw (E)
Screw (F)
Connector (H)
Screw
Screw (G)
Spring
A/C Head Base Unit

Figure 3-10

3. The A/C Head (1) Unit can be reinstalled by reversing the removal procedure.

B. Adjustment After Re-installing

Figure 3-11 shows the order of steps for adjusting the mechanical and electrical.
These adjustments should be performed after completion of reinstalling the A/C Head (1) Unit.

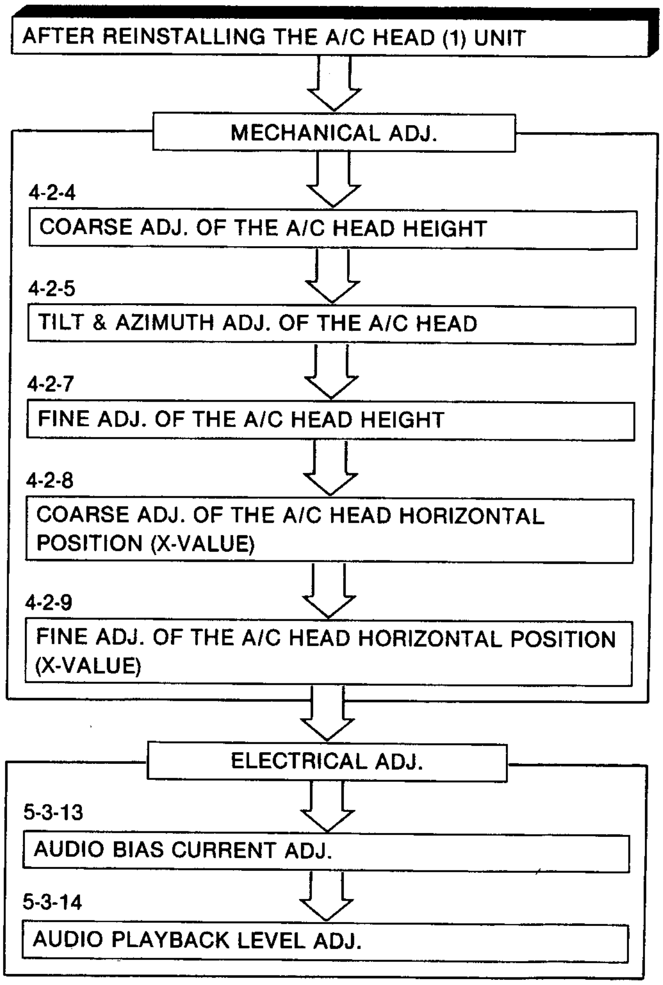
AFTER REINSTALLING THE A/C HEAD (1) UNIT
MECHANICAL ADJ.
4-2-4
COARSE ADJ. OF THE A/C HEAD HEIGHT
4-2-5
TILT & AZIMUTH ADJ. OF THE A/C HEAD
4-2-7
FINE ADJ. OF THE A/C HEAD HEIGHT
4-2-8
COARSE ADJ. OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
4-2-9
FINE ADJ. OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
ELECTRICAL ADJ.
5-3-13
AUDIO BIAS CURRENT ADJ.
5-3-14
AUDIO PLAYBACK LEVEL ADJ.

Figure 3-11

3-4-4. FULL ERASE HEAD MAINTENANCE PROCEDURES

A. Replacement of the Full Erase Head

1. Disconnect a connector (J).
2. Unscrew a screw (K) and remove the Full Erase Head.

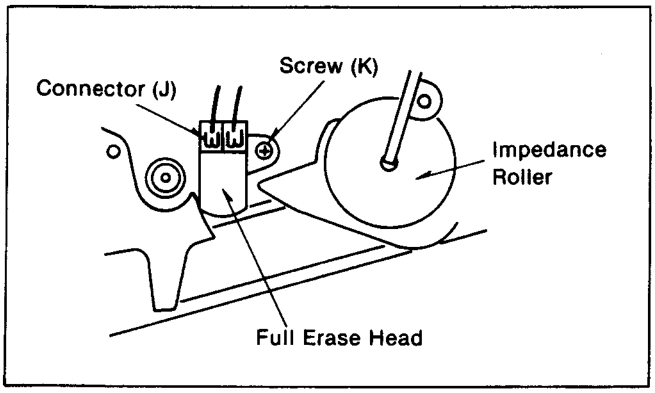
Connector (J)
Screw (K)
Impedance Roller
Full Erase Head

Figure 3-12

3. The new Full Erase Head can be reinstalled by reversing the removal procedure.

3-4-5. PRESSURE ROLLER MAINTENANCE PROCEDURES

A. Replacement of the Pressure Roller Unit

1. Place the deck in STOP or EJECT mode.
2. Remove the Pinch Can Cap.
3. Remove the Pressure Roller Unit.

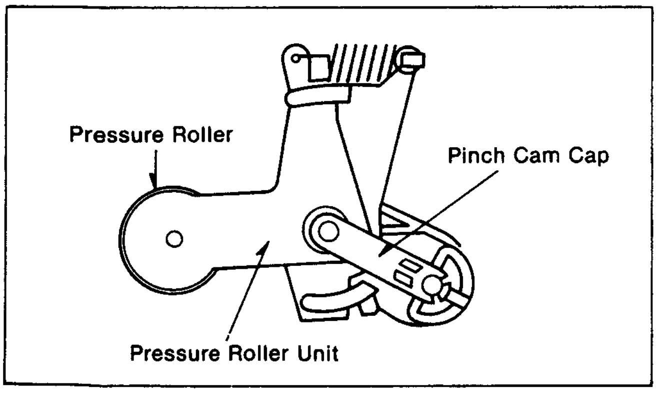
Pressure Roller
Pinch Cam Cap
Pressure Roller Unit

Figure 3-13

4. The new Pressure Roller Unit can be re-installed by reversing the removal procedure.

3-4-6. REEL MOTOR UNIT MAINTENANCE PROCEDURES

A. Replacement of the Reel Unit

1. Remove 6 screws (L) and carefully lift the DD Reel Unit.
2. Disconnect a connector.

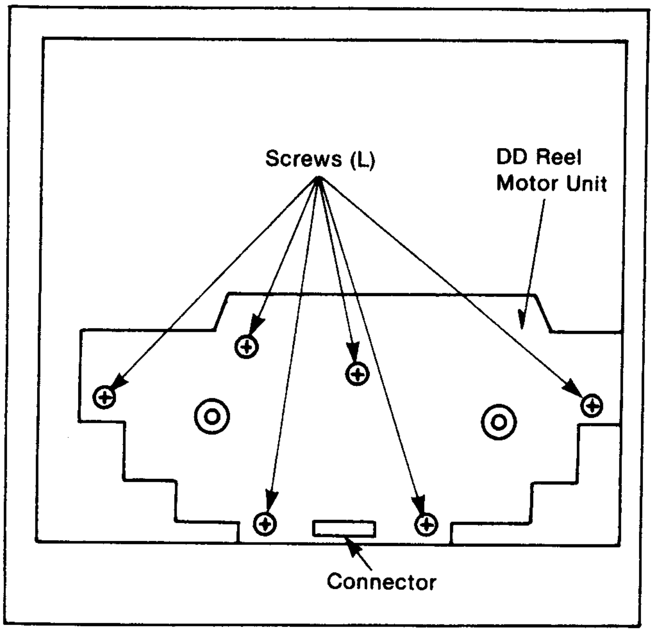
Screws (L)
DD Reel Motor Unit
Connector

Figure 3-14

3. The Reel Motor Unit can be re-installed by reversing the removal procedure.

<<NOTE>>
When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear.

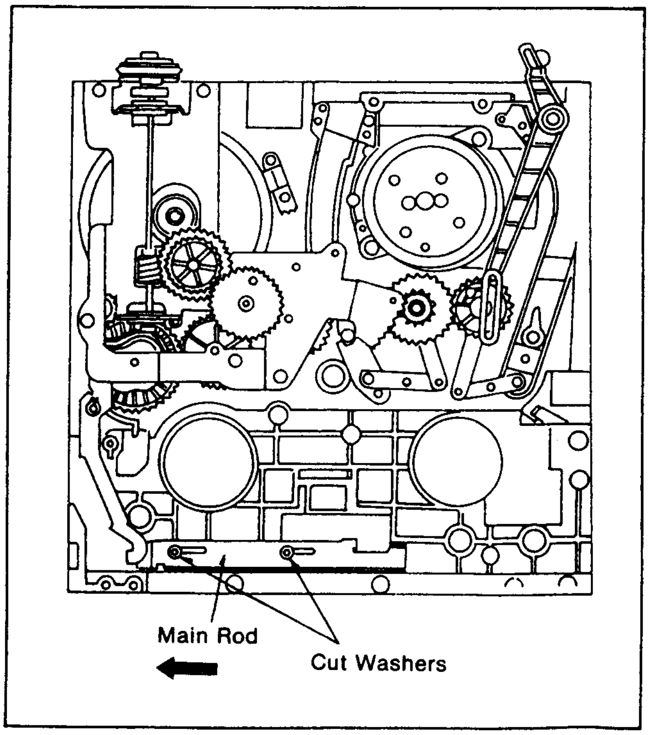
Main Rod
Cut Washers

Figure 3-15

3-4-7. LOADING MOTOR UNIT MAINTENANCE PROCEDURES

A. Replacement of the Loading Motor Unit

1. Remove the Loading Belt.
2. Remove the Loading Motor Pulley.
3. Disconnect a connector.
4. Unscrew 2 screws (M) and remove the Loading Motor Unit.

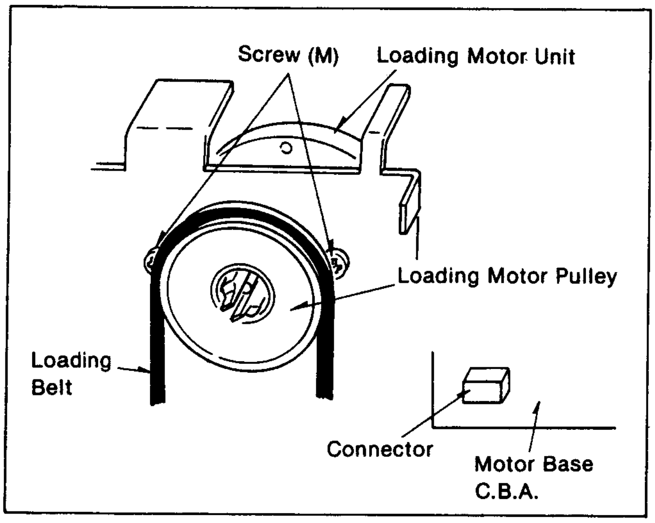
Screw (M)
Loading Motor Unit
Loading Motor Pulley
Loading Belt
Connector
Motor Base C.B.A.

Figure 3-16

5. The Loading Motor Unit can be reinstalled by reversing the removal procedure.

3-4-8. HEAD CLEANING PAD UNIT MAINTENANCE PROCEDURES

A. Replacement of the Head Cleaning Pad

1. Remove a Cut Washer (N)(Figure 3-17) and the Head Cleaning Pad Unit.

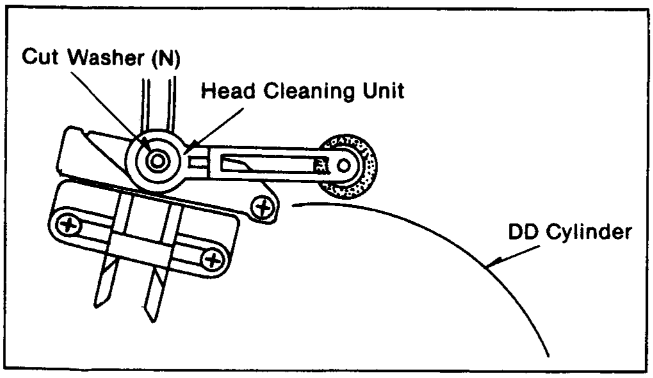
Cut Washer (N)
Head Cleaning Unit
DD Cylinder

Figure 3-17

2. Remove a Cut Washer (V)(Figure 3-18) and replace the Head Cleaning Pad.
3. The Head Cleaning Pad Unit can be reinstalled by reversing the removal procedure.

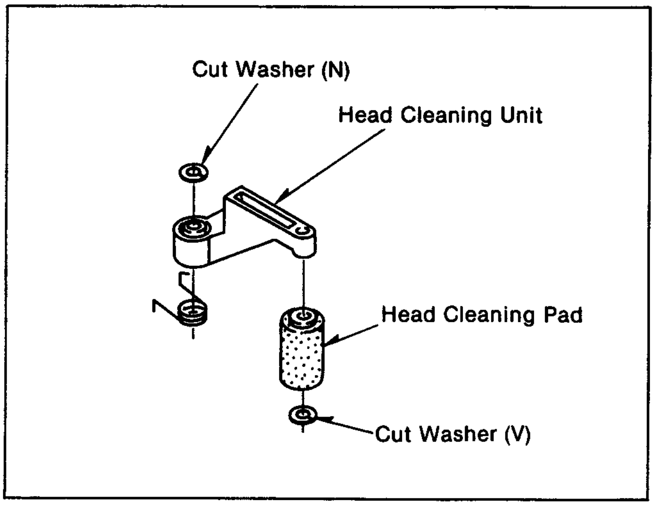
Cut Washer (N)
Head Cleaning Unit
Head Cleaning Pad
Cut Washer (V)

Figure 3-18

3-4-9. MODE SWITCH MAINTENANCE PROCEDURES

A. Replacement of the Mode Switch

1. Place the deck in the STOP mode.
2. Remove the Cassette Compartment Unit. (Refer to Disassembly Procedures)
3. Remove the Pinch Cam Cap and Pressure Roller Unit.
4. Remove the Pinch Cam.

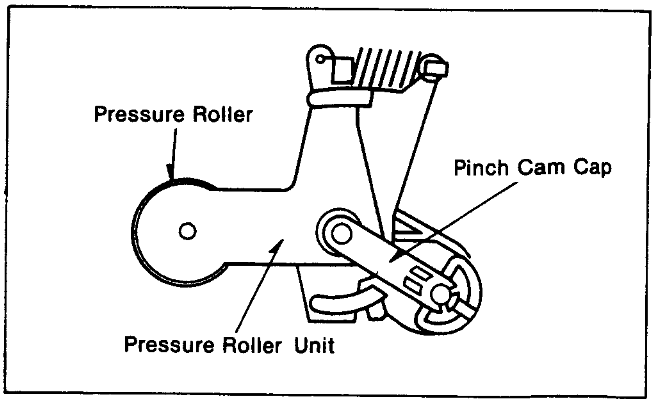
Pressure Roller
Pinch Cam Cap
Pressure Roller Unit

Figure 3-19

5. Unscrew 2 screws (P) and remove the Loading Motor Base.
6. Unscrew a screw (Q) and unsolder 5 of soldered portions.
7. Finally remove the Mode Switch.
8. Install a Mode Switch and tighten screw (Q), then solder 5 soldering portions.
9. Install the Pinch Cam and Pressure Roller Unit.(Refer to " Assembly Procedures of Pinch Cam & Pressure Roller Unit.")
10. Install the Loading Motor Base and tighten screws (P).
11. Install the Cassette Compartment. (Refer to Reinstallation of Cassette Compartment.)

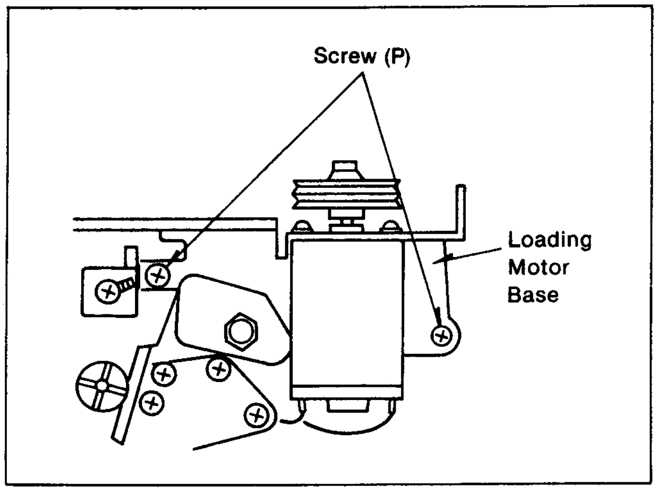
Screw (P)
Loading Motor Base

Figure 3-20

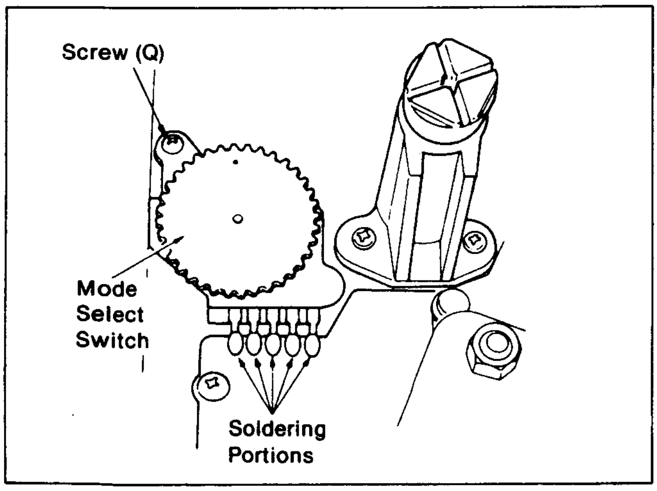
Screw (Q)
Mode Select Switch
Soldering Portions

Figure 3-21

3-4-10. PULL-OUT POST (P5) SHUFT MAINTENANCE PROCEDURES

1. Remove a Nut (R) and remove the Pull-out Post (P5) as shown in Figure 3-22.
2. Wipe dirt from the shuft using soft cloth.
3. Apply a Morlytone Grease to the shuft.
4. Re-iustall the Pull-out Post (P5) and the Nut (R).
5. Adjust the height of Pull-out Post (P5)(Refer to 5-2-3. Adjustment of the Pull-out Post (P5) Height).

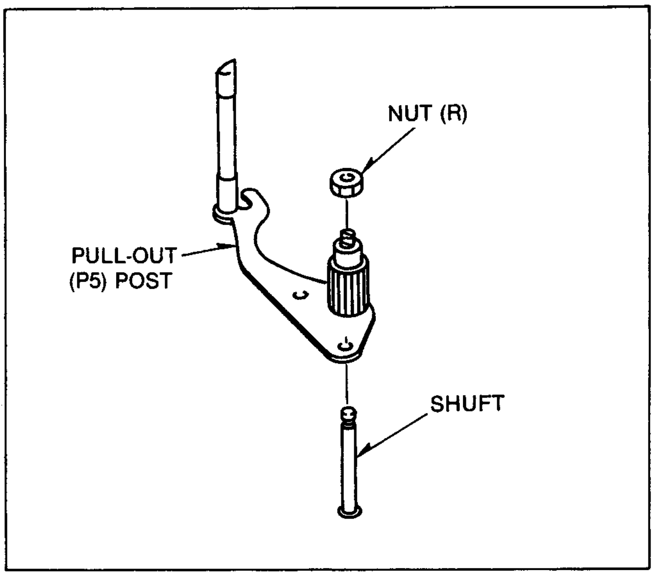
NUT (R)
PULL-OUT (P5) POST
SHUFT

Figure 3-22

3-4-11. CAPSTAN ROTOR AND STATOR MAINTENANCE PROCEDURES

1. Remove the Loading Belt. (Figure 3-23)
2. Remove 4 screws and the Gear Base Unit. (Figure 3-23)

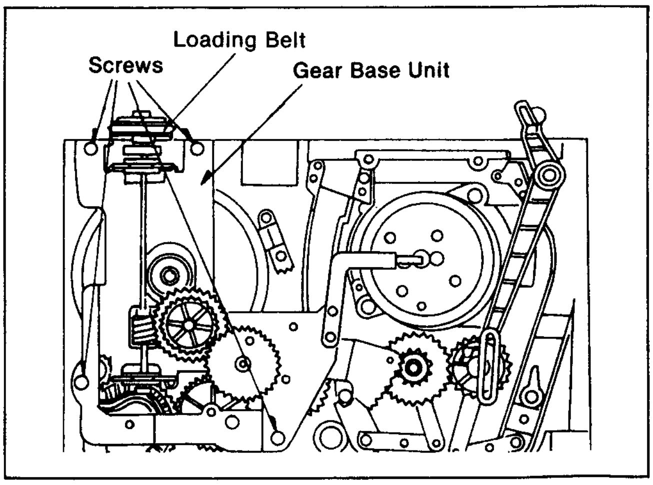
Loading Belt
Screws
Gear Base Unit

Figure 3-23

3. Carefully pull out the Capstan Rotor Unit, taking care so as not to lose the 2 Oil Seals as shown in Figure 3-24.

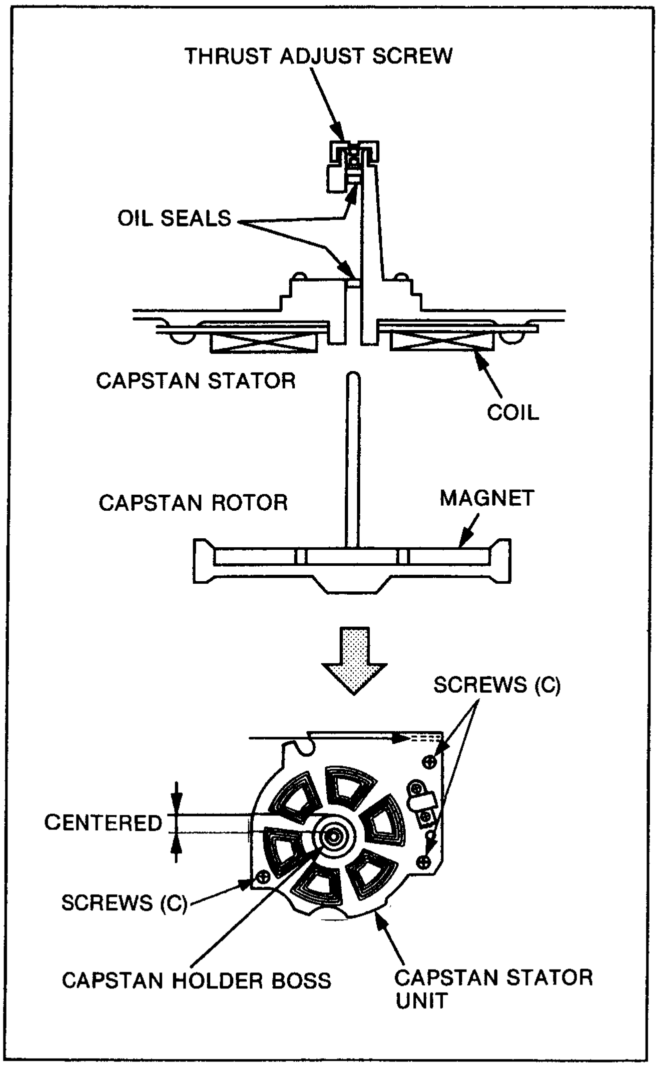

Figure 3-24

4. Disconnect a connector on the Capstan Stator Unit and remove 3 black screws and then lift the Capstan Stator Unit.
5. Replace the new Capstan Stator Unit and then tighten 3 black screws and connect a connector on the Capstan Stator Unit.

<<NOTE>>

When reinstalling the Capstan Stator Unit, the hole in the Capstan Stator Unit must be centered within the hole of chassis.

6. Before replacement of new Capstan Rotor Unit, loosen the Thrust Adjust Screw completely.
7. Replace the new Capstan Rotor, carefully inserting the 2 Oil Seals as shown in Figure 3-24.

<<NOTE>>

1. *Hold the new Capstan Rotor Unit firmly, when replacing it, so the rotor will not be pulled toward the stator too quickly (due to magnetic force).*
   Placing some paper on the coils before rotor installation may prevent accidental damage to the coils if the above caution is not observed.
2. *During replacement, do not touch the Capstan Shaft with any hard material like drivers or tweezers.*

3-4-12. BACK-UP BATTERY REPLACEMENT PROCEDURES

<<NOTE>>

Please refer the Section 2 DISASSEMBLY PROCEDURES of the Service Manual (Page 2-1).
Before removing the Back Up C.B.A. be sure to unplug the Power cable.

1. Remove the Bottom Plate and lift up the Servo C.B.A.
2. Switch the Back Up SW to "OFF" side on the Servo C.B.A.
3. Unscrew 2 screws (U) and remove a connector on the Back Up Sub C.B.A.
4. Re-solder both side of the Battery and replace to the new battery.

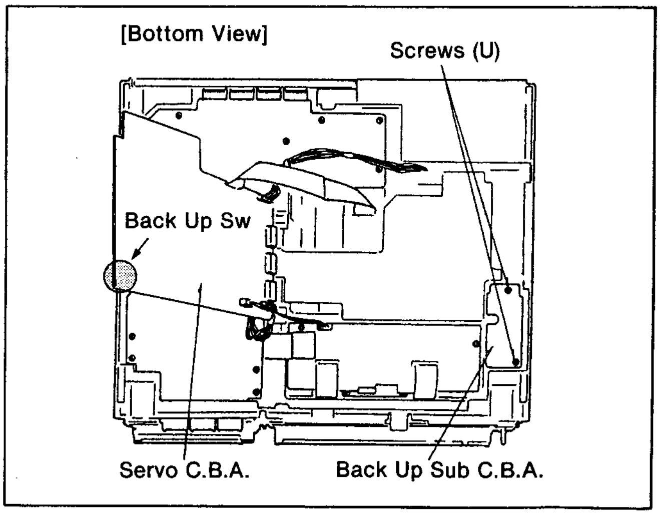

Figure 3-25

3-5. HOUR METER RESET

1. Turn off the power.
2. Connect a jumper wire between TP6002 and TP6003.
3. Turn on the power while pushing the reset button with the hour meter button together.

3-6. INITIAL SETTING

<<NOTE>>

To return set-up items to their original (factory-set) settings.

1. Turn off the power.
2. Turn on the power while pushing the STOP, FF and REW bottons together.

Section 4

MECHANICAL ADJUSTMENTS

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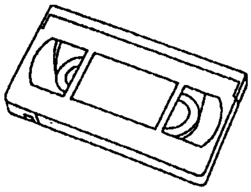
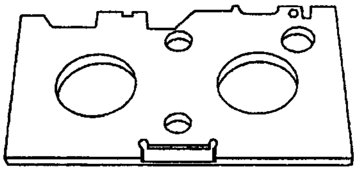
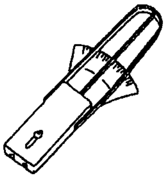
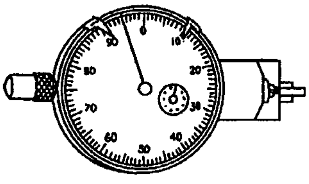
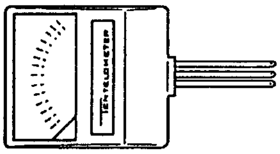
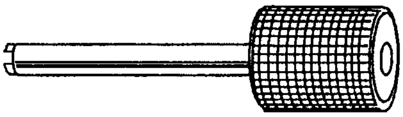
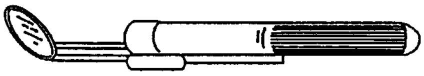
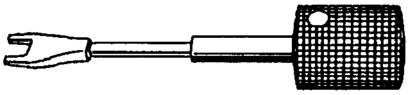
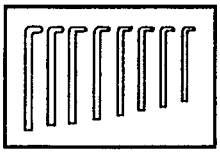
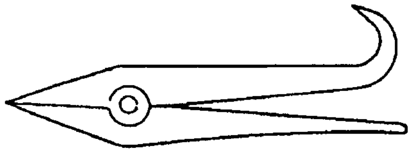
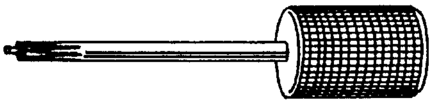
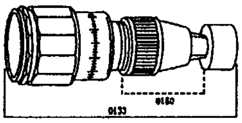
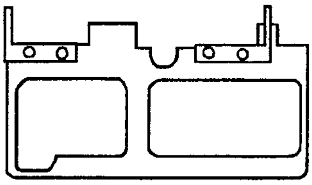
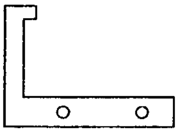
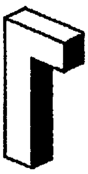
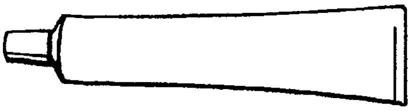
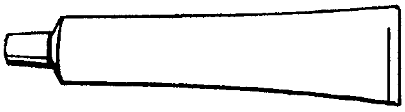
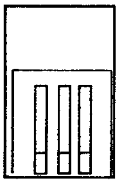
4-1. SERVICING FIXTURES AND TOOLS

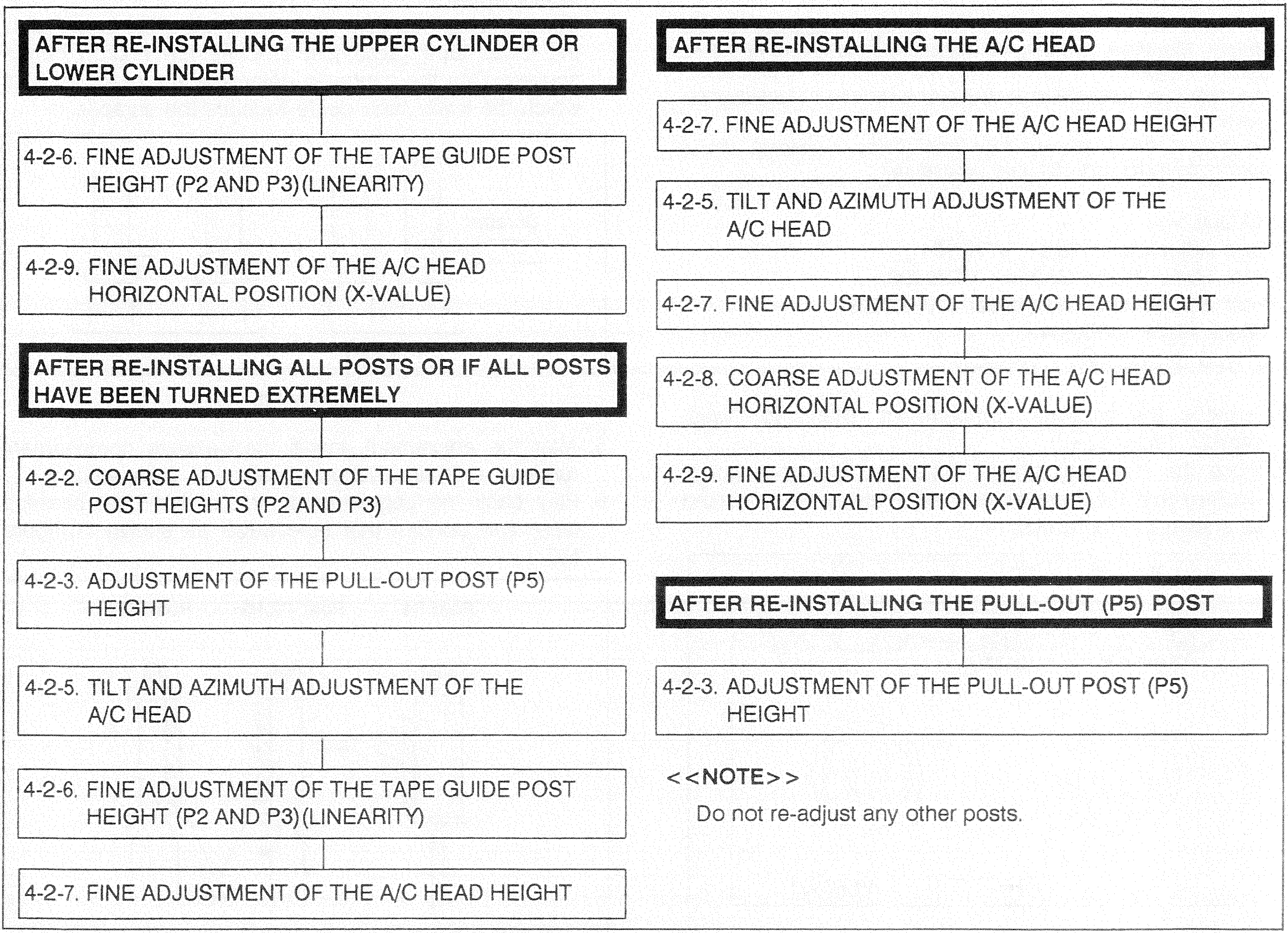
The specified servicing fixture must be used to conduct adjustment.
The following fixtures, tools and measuring equipments are required to conduct complete Mechanical Adjustments.

VFM8180HADH ; VHS Alignment Tape 	VFK0191 ; Post Adjustment Plate 	VFK66 ; Fan Type Tension Gauge 
VFK0190 ; Reel Table Height Fixture 	VFK0132 ; Back Tension Meter (Tentelometer, Made in U.S.A.) 	VFK0329 ; Post Adj.Screwdriver 
VFK0343 ; Check Light 	VFK0328 ; H-Position Adj. Screwdriver 	VFK0326 ; Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm) 
VFK0335 ; Retaining Ring Remover 	VFK0269 ; L Type Screwdriver 	VFK0330 ; Fine Adjustment Screwdriver (3mm ϕ) 
VFK0133 ; Dial Torque Gauge VFK0180 ; Plastic Clamper Only VFK0134 ; Adaptor for VFK0133 	VFK0236 ; Tension Post Adj. Plate 	VFK0806 ; Tension Sensor Adj. Fixture 
VFK0344 ; Post Height Adj. Fixture 	High Quality Machine Oil (Reel Shaft, Capstan Saft etc.) <<PURCHASE LOCALLY>>	Cleaning Liquid (Alchol) (Tape Transport Rubber Parts etc.) <<PURCHASE LOCALLY>>
MOR265 ; Morlytone Grease (Black) (for metal part) 	VFK0680 ; S.C.R. Grease (White) (for plastic part) 	VFK27 ; Head Cleaning Stick 

4-2. TAPE INTERCHANGEABILITY ADJUSTMENT PROCEDURES

4-2-1. ADJUSTMENT FLOW CHART

This flow chart describes the order of steps for adjusting the tape guide posts and A/C head in order to gain access to the items needing servicing. (Figures M1 and M2)



AFTER RE-INSTALLING THE UPPER CYLINDER OR LOWER CYLINDER

- 4-2-6. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 AND P3)(LINEARITY)
- 4-2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

AFTER RE-INSTALLING ALL POSTS OR IF ALL POSTS HAVE BEEN TURNED EXTREMELY

- 4-2-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 AND P3)
- 4-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT
- 4-2-5. TILT AND AZIMUTH ADJUSTMENT OF THE A/C HEAD
- 4-2-6. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 AND P3)(LINEARITY)
- 4-2-7. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT

AFTER RE-INSTALLING THE A/C HEAD

- 4-2-7. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT
- 4-2-5. TILT AND AZIMUTH ADJUSTMENT OF THE A/C HEAD
- 4-2-7. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT
- 4-2-8. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
- 4-2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

AFTER RE-INSTALLING THE PULL-OUT (P5) POST

- 4-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

<<NOTE>>

Do not re-adjust any other posts.

Figure M1

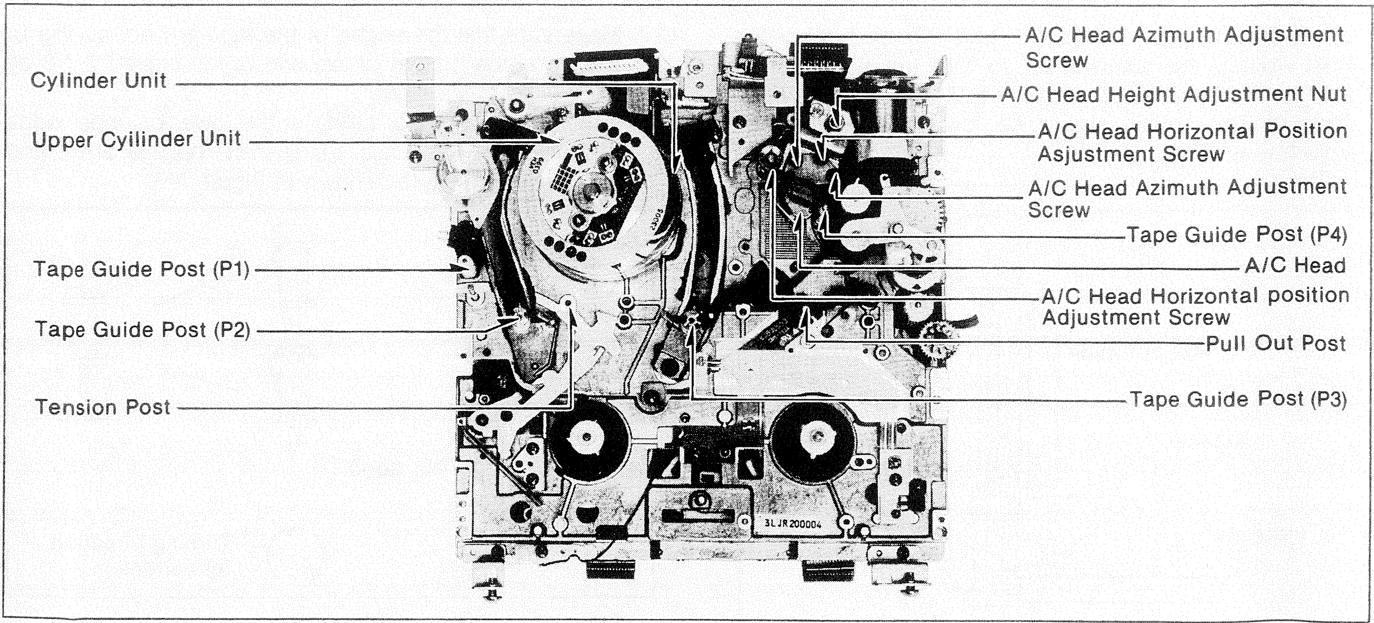

Cylinder Unit
Upper Cyilinder Unit
Tape Guide Post (P1)
Tape Guide Post (P2)
Tension Post
A/C Head Azimuth Adjustment Screw
A/C Head Height Adjustment Nut
A/C Head Horizontal Position Asjustment Screw
A/C Head Azimuth Adjustment Screw
Tape Guide Post (P4)
A/C Head
A/C Head Horizontal position Adjustment Screw
Pull Out Post
Tape Guide Post (P3)
3LJR200004

Figure M2

4-2-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

<<NOTE>>

The Tape Guide Posts have been precisely adjusted at the factory. Therefore, normally do not change the height of the P2 and P3 Posts.

The following adjustment is required only when replacing the posts.

To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

<<TOOL>>

Post Adjustment Plate ; VFK0191
Reel Table Height Gauge ; VFK0190
Post Adjustment Screwdriver ; VFK0329
Check Light ; VFK0343
L Type Screwdriver ; VFK0326

1. Remove the cassette compartment. (Refer to Disassembly Procedures)
2. Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M3.

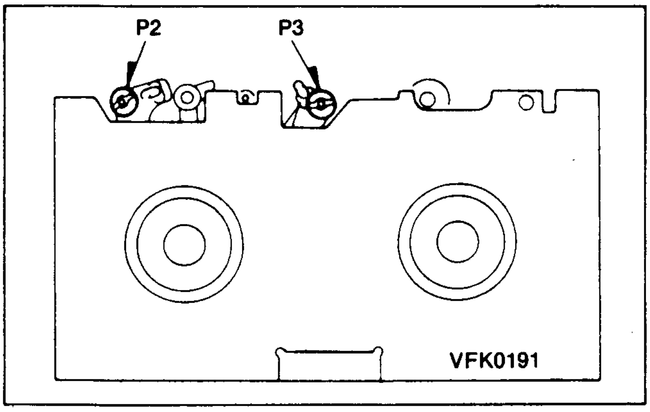


Figure M3

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of post becomes as shown in Figure M4. That is the lower edge of Tape guide should be lower than surface of Adjustment Plate.

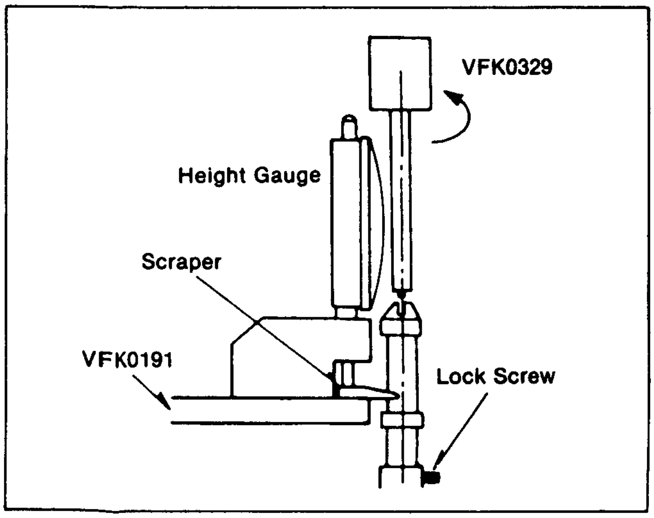


Figure M4

<<NOTE>>

Before turning P2 and P3 posts, slightly loosen the Lock Screw using the L Type Screwdriver.

4. Place the scraper of Reel Table Height Gauge as shown in Figure M5.
   Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

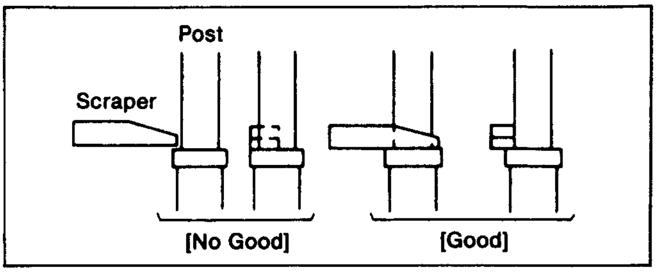


Figure M5

5. After the adjustment, install the cassette compartment referring to Reinstallation of cassette compartment.
6. Play back the beginning portion of NV-E240 cassette tape, and confirm that tape travel as shown in Figure M6.

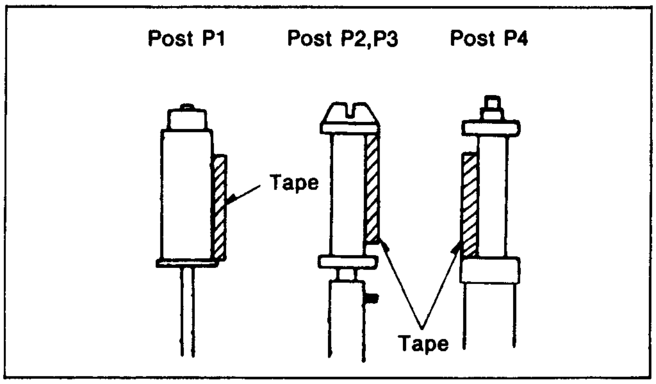


Figure M6

7. Make sure that the edges of the tape are not curling or waving at the bottom or top end of the posts P2, P3 by using the Check Light.
8. If there are waving or frilling at the lower or upper edge of the P2 and P3 posts, readjust the heights of P2 and P3 Posts correctly as shown in Figure M7.

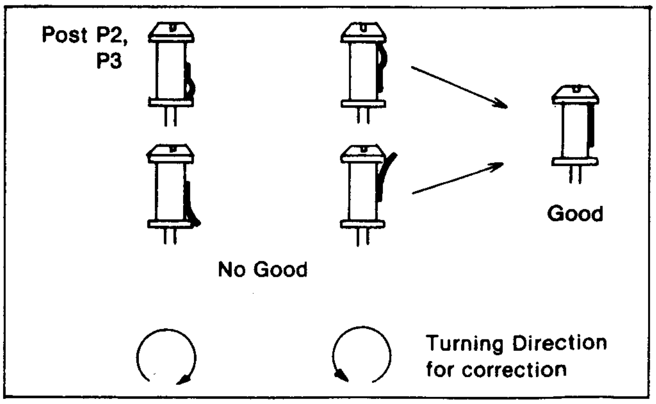


Figure M7

9. And confirm that the tape runs along the Cylinder Lead Correctly.

4-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

<<TOOL>>
Post Adjustment Plate ; VFK0191
Reel Table Height Gauge ; VFK0190
Nut Driver ; Purchase locally

<<SPEC>>
- 0.03mm +/- 0.01mm

<<NOTE>>
Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment. (Refer to Disassembly procedures)
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Worm Shaft counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M8.

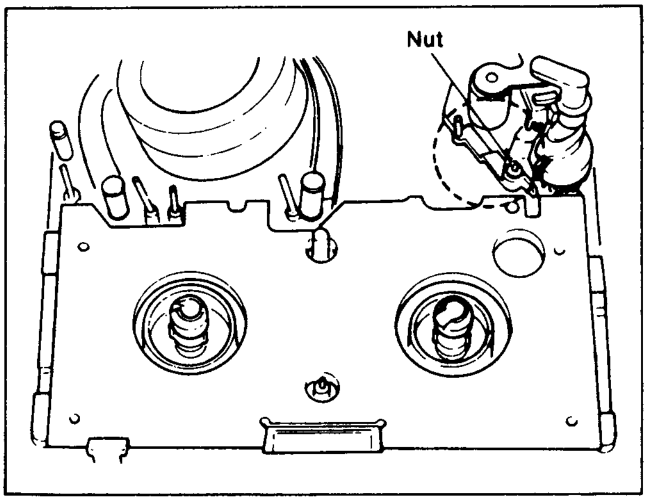


Figure M8

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero "0" as shown in Figure M9.

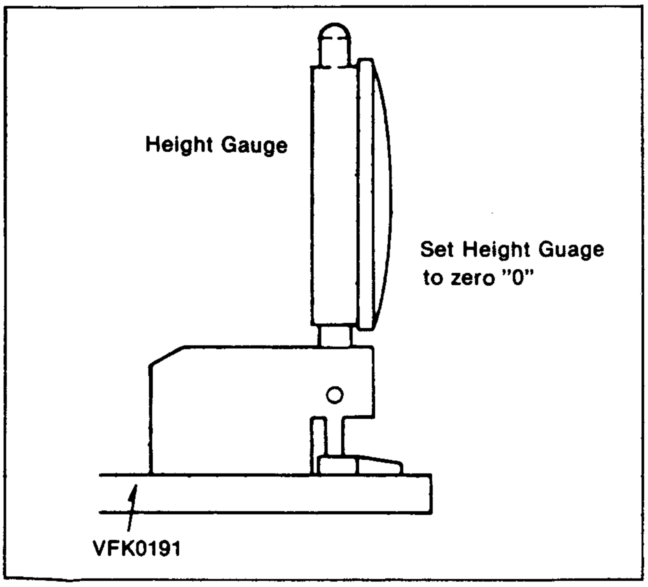


Figure M9

5. Place the Reel Table Height Gauge as shown in Figure M10 and turn the nut slowly until the gauge reads -0.03 mm +/- 0.01mm.

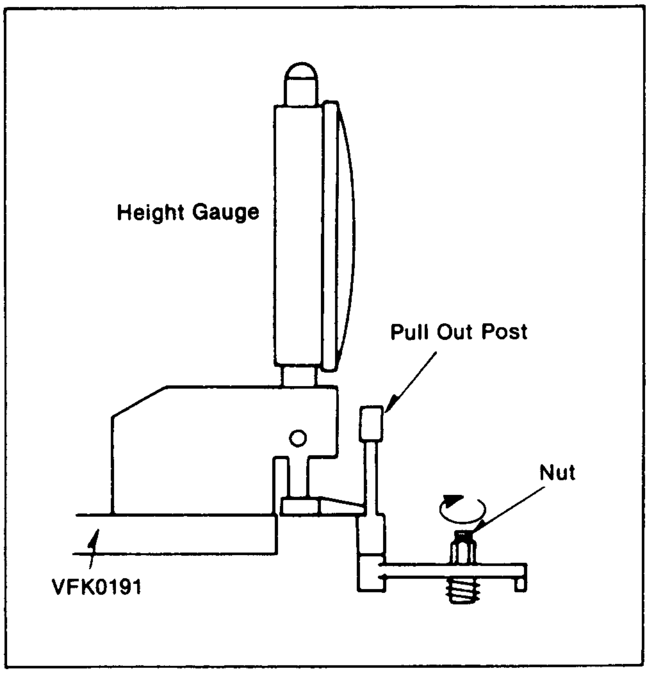


Figure M10

6. After the adjustment, install the cassette compartment. (Refer to Reinstallation of Cassette Compartment).
7. Play back a normal cassette tape on Review Search mode, and make sure that the edges of the tape are not curling or waving at the bottom end of the P4 post by using the Check Light as shown in Figure M11.

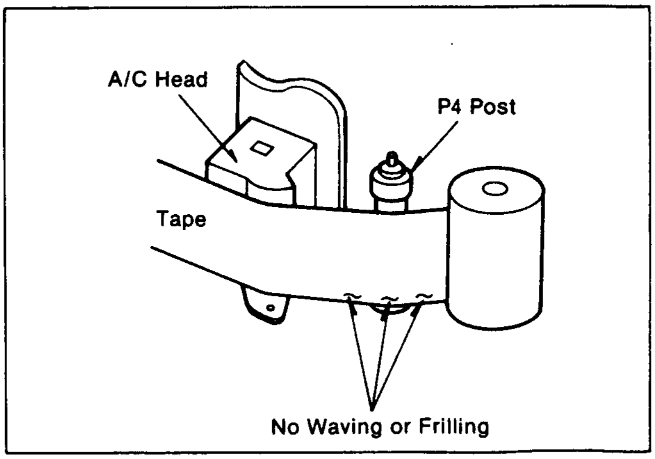


Figure M11

<<NOTE>>
There is easy method to check Waving or Frilling. If there is Waving or Frilling in the lower edge, the white black pattern which is reflected on the tape will curve or not linear as shown in Figure M12.

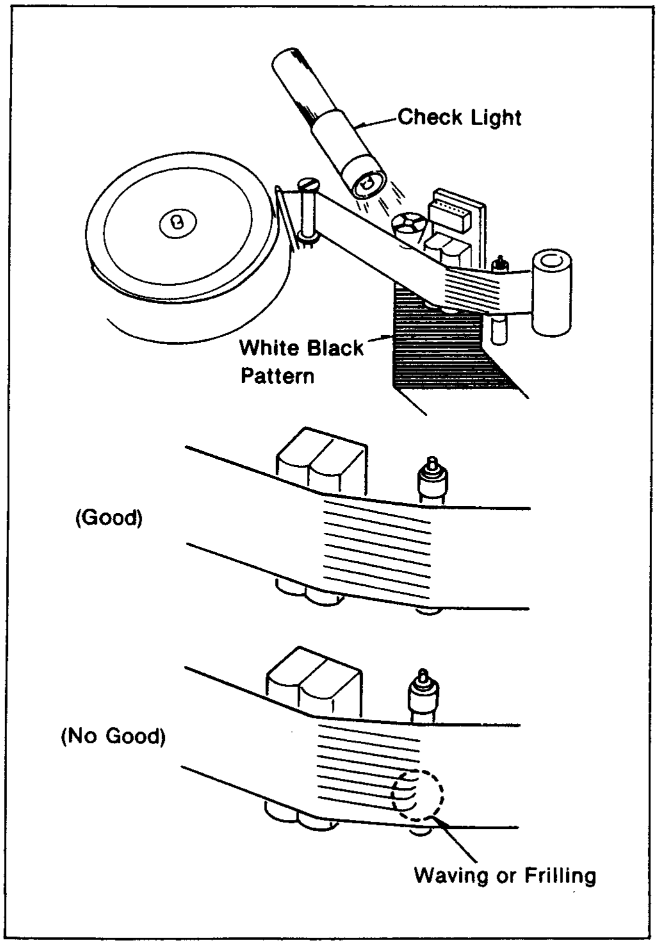

Check Light
White Black Pattern
(Good)
(No Good)
Waving or Frilling

Figure M12

8. If curling appears, readjust P5 post.

4-2-4. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT

<<NOTE>>

This procedure should be performed only when the A/C Head is replaced.

<<TOOL>>

Check Light ; VFK0343
Nut Driver ; Purchase locally

1. With the tape running, look at the lower edge of the control head by using the check light.
2. Adjust the Nut (A) as shown in Figure M13 by turning the Nut (A) clockwise to lower the head, and counterclockwise to raise it.

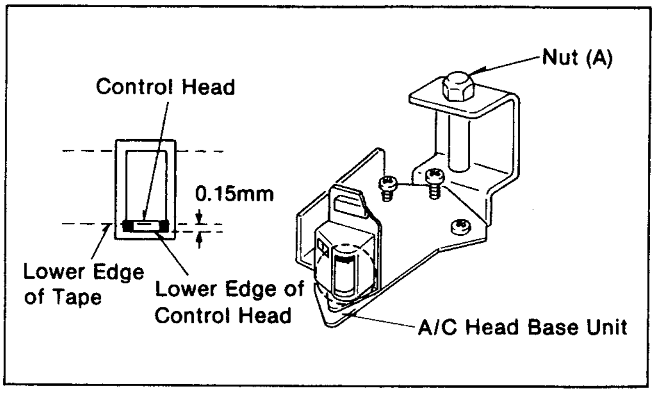

Control Head
Nut (A)
0.15mm
Lower Edge of Tape
Lower Edge of Control Head
A/C Head Base Unit

Figure M13

4-2-5. TILT & AZIMUTH ADJUSTMENT OF THE A/C HEAD

<<NOTE>>

This procedure should be performed only when the A/C Head is replaced or posts heights are readjusted.

<<TOOL>>

Alignment Tape ; VFM8180HADH
Check Light ; VFK0343
Screwdriver(+) ; Purchase locally
VHS Video Tape

1. Play back a VHS Video tape which the amount of tape winding of a Supply Reel is more than the amount of tape winding of a Take up Reel. Turn a screw (B) to clockwise until Waving or Frilling appears in the lower edge of P4 post as Figure M11.

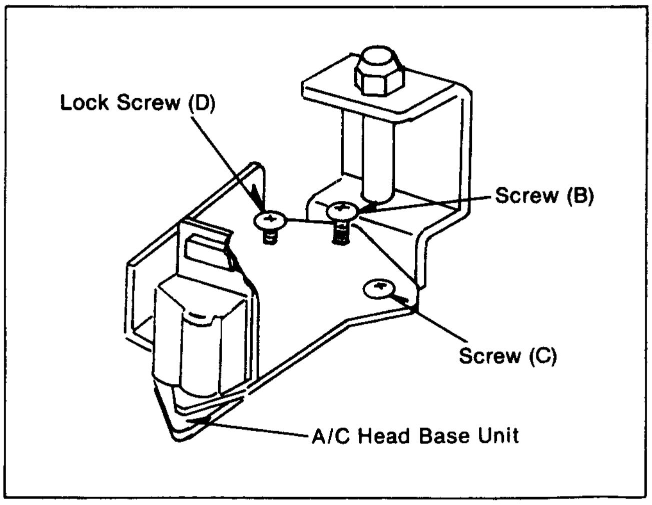

Lock Screw (D)
Screw (B)
Screw (C)
A/C Head Base Unit

Figure M14

<<NOTE>>

There is easy method to check Waving or Frilling. If there is Waving or Frilling in the lower edge, White Black pattern which is reflected on the tape will curve or not linear. (Figure M12)

2. Turn the screw (B) to counter-clockwise until waving or frilling do not appear in the lower edge of P4 post.
3. Connect the scope to Audio Output on the rear panel.
4. Play back the 2-nd portion (Normal Audio 6KHz) of the alignment tape (VFM8180HADH).
5. Adjust the screw (B) and (C) so that the output level becomes maximum as shown in Figure M15.

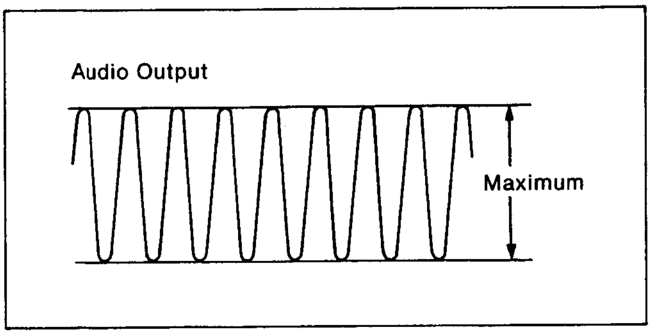


Figure M15

6. Confirm that the tape runs around lower limiter of P4 post by using the check light.
7. If there is waving or frilling in the lower edge (Figure M13), then repeat step 3 to 5.

4-2-6. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 and P3) (LINEARITY)

<<TOOL>>
Alignment Tape ; VFM8180HADH
Post Adjustment Screwdriver ; VFK0329

<<NOTE>>
Before playing back the alignment tape playback a normal cassette tape and confirm correct transport.

1. Connect a scope to TP3004 on the Video (1) C.B.A. and TP8004 on the Video (2) C.B.A. to Ext-Trigger the scope.
2. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).
3. Press the Tracking Control button ("+" or "-") and adjust for maximum VIDEO FM envelope.
4. If the RF envelope appears like example "A" or "B" in Figure M17 then adjustment of the tape guide post (P2 : Entrance) is necessary.
5. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Figure M17-"C".

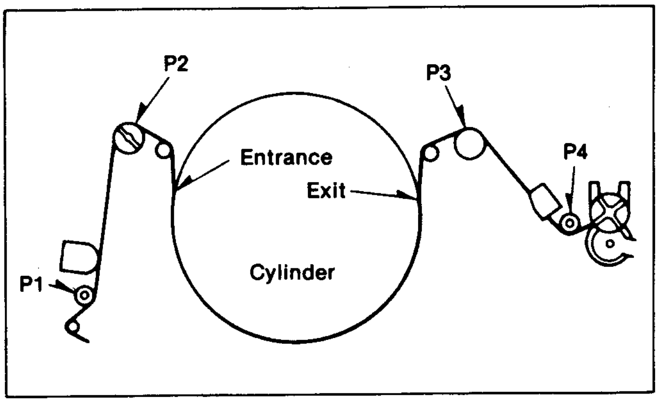


Figure M16

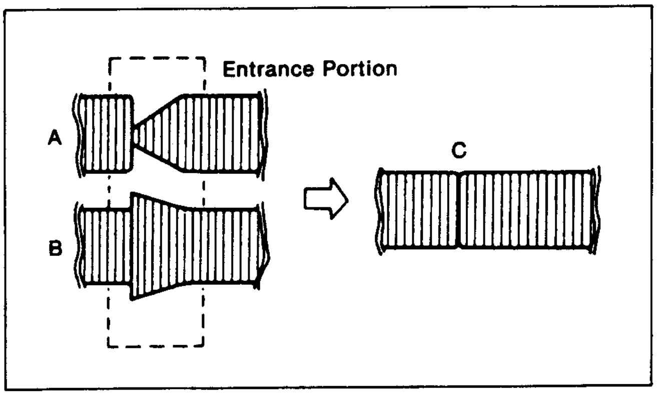


Figure M17

6. If the RF envelope appears like example "D" or "E" in Figure M18, then adjustment of the tape guide post (P3 : Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M18-F.

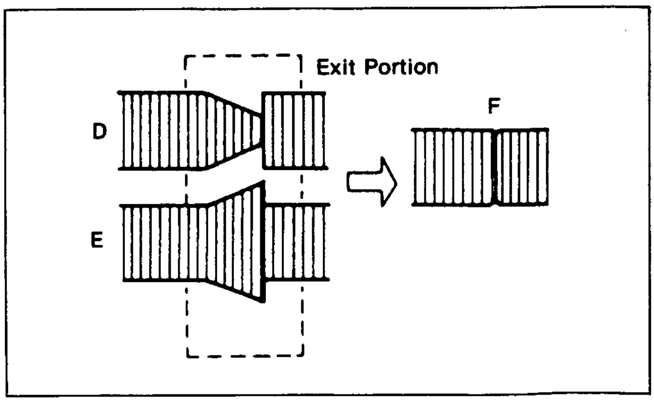


Figure M18

8. Turn the Tracking VR fully clockwise and counterclockwise. The output envelope should vary nearly parallel with other condition as shown in Figure M19.

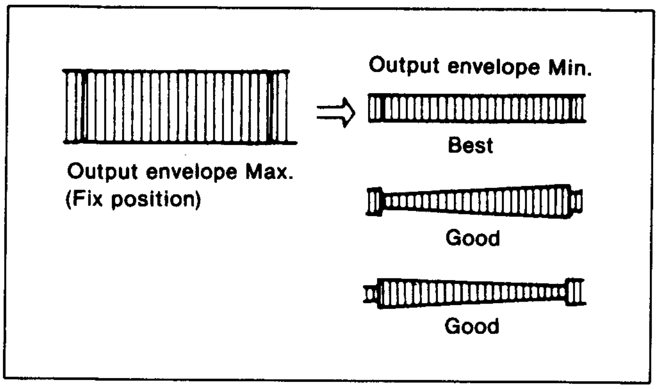

Output envelope Min.
Best
Output envelope Max.
(Fix position)
Good
Good

Figure M19

9. Turn the Tracking VR into center fix position and adjust for maximum RF envelope.
   If the RF envelope does not meet these specifications,

   V1/VO >= 0.7
   V2/VO >= 0.8
   V3/VO >= 0.7

   then repeat steps 4-9 again.

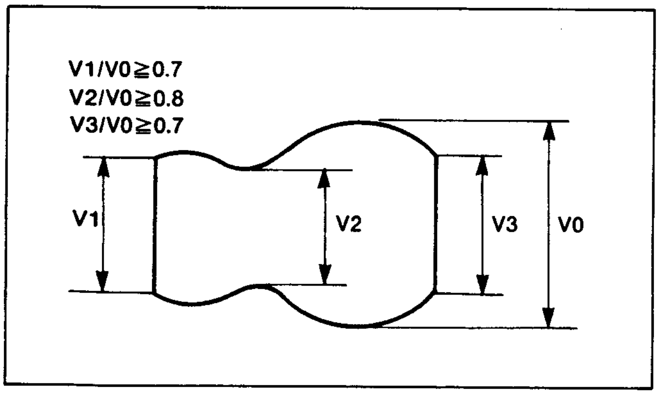

V1/V0≧0.7
V2/V0≧0.8
V3/V0≧0.7
V1
V2
V3
V0

Figure M20

4-2-7. FINE ADJUSTMENT OF A/C HEAD HEIGHT

<<NOTE>>

Before this adjustment 5-2-3. Coarse Adjustment of the A/C Head Height should be performed.

<<TOOL>>

Alignment Tape ; VFM8180HADH
Nut Driver ; Purchase locally

1. Connect a scope to Audio Output on the rear panel.
2. Play back the 2-nd portion (Normal Audio 6kHz) of the Alignment Tape (VFM8180HADH).
3. Adjust the Nut (A)(Figure M21) so that the Audio output level becomes maximum as shown in Figure M22.

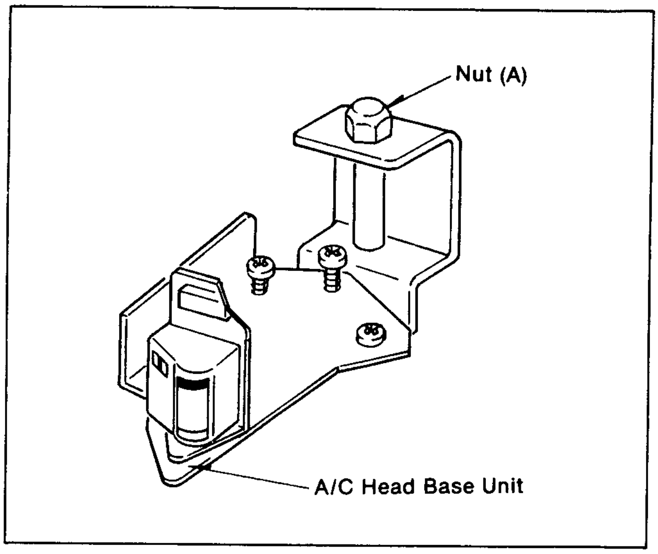

Nut (A)
A/C Head Base Unit

Figure M21

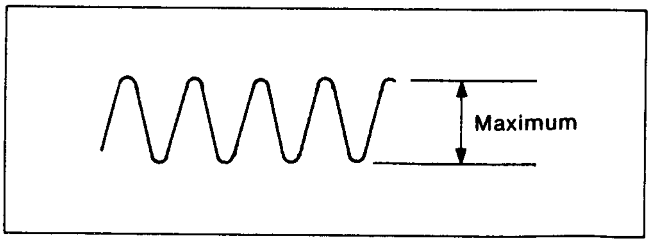


Figure M22

4-2-8. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

<<NOTE>>

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver ; VFK0328
Alignment Tape ; VFM8180HADH

1. Connect a scope CH1 to TP3004 on the Video (1) C.B.A. and a scope CH2 to Audio Output on the rear panel.
2. Connect a jumper wire between TP6002 and TP6003 on the System Control C.B.A.
3. Play back the 1-st position (Monoscope 1 and Audio / Every 10-th field is skipped) of the Alignment tape VFM8180HADH.
4. Press both of the Tracking Control buttons ("+" and "-") together on the Front Panel.
5. Adjust the A/C head horizontal position screw so that the phase of audio drop out and video RF envelope drop-out becomes the same as shown in Figure M23.

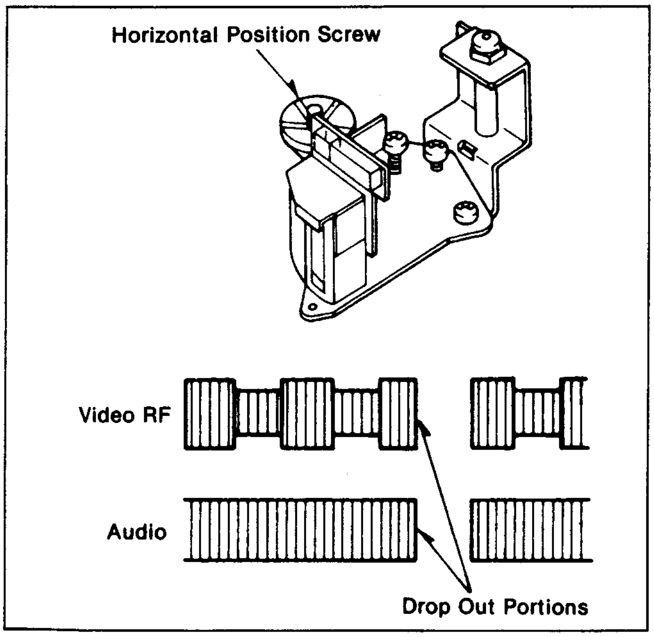


Figure M23 Horizontal Position Adjustment of A/C Head

<<NOTE>>

After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop-out and Video RF envelope drop-out may be changed slightly.

4-2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

<<NOTE>>

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver ; VFK0328
Alignment Tape ; VFM8180HADH

1. Connect a scope to TP3004 on the Video (1) C.B.A. and TP8004 on the Video (2) C.B.A. to Ext-Trigger the scope.
2. Connect a Jumper wire between TP6002 and TP6003 on the System Control C.B.A.
3. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).
4. Press both of the Tracking Control buttons ("+" and "-") together on the Front Panel.
5. Adjust the Horizontal Position Screw (Figure M22) of A/C head so that the RF signal becomes maximum level as shown in Figure M24.

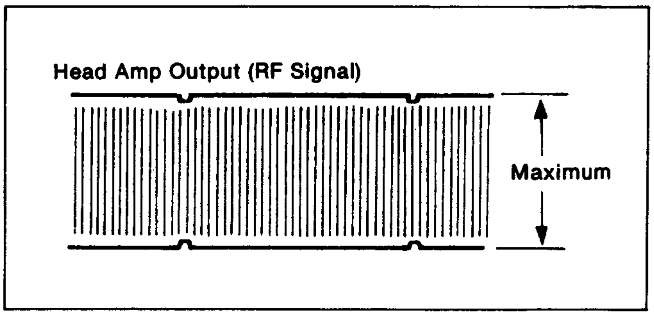


Figure M24

4-3. OTHER MECHANICAL ADJUSTMENT PROCEDURES

4-3-1. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

<<TOOL>>
Back Tension Meter ; VFK0132
VHS Cassette Tape (180 min. tape except S-VHS tape)

A. FWD Tension Adjustment

<<SPEC>>
23g to 27g

1. Play back the cassette tape from the beginning and wait until the tape movement get the stabilization. (for approx. 10 to 20 seconds)
2. Pull the Impedance Roller in the direction indicated the arrow in Figure M25 secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.

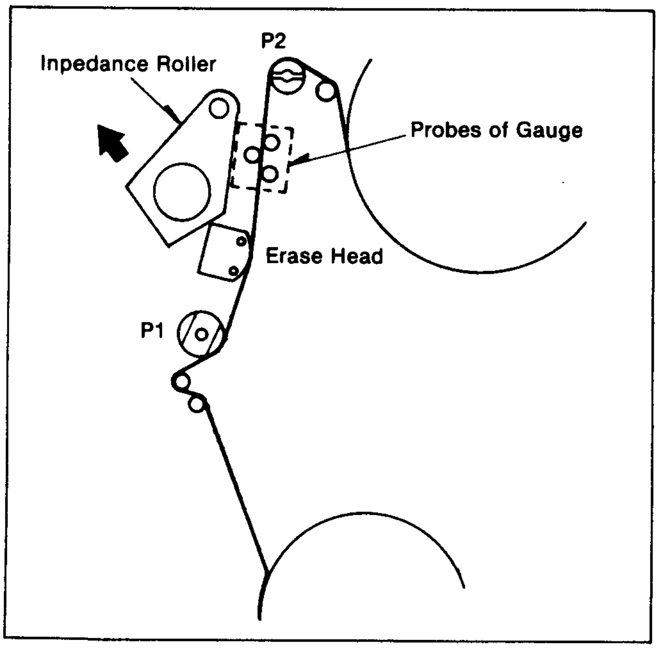


Figure M25 Measurement of Back Tension

4. If it is out of specification, replace the Tension spring.

B. Rev Tension Adjustment

<<SPEC>>
30g to 60g

1. Play back the cassette tape on 3H Reverse Play mode from the beginning and wait until the tape movement get the stabilization. (for approx. 10 to 20 seconds)
2. Pull the Impedance Roller in the direction indicated by the arrow in Figure M25 secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
4. If it is out of specification, replace the Tension spring.

<<NOTE>>
While measuring, make sure that the three probes of the meter are all in good contact with the tape.
As the tension meter is very sensitive, we recommend taking 3 separate readings.

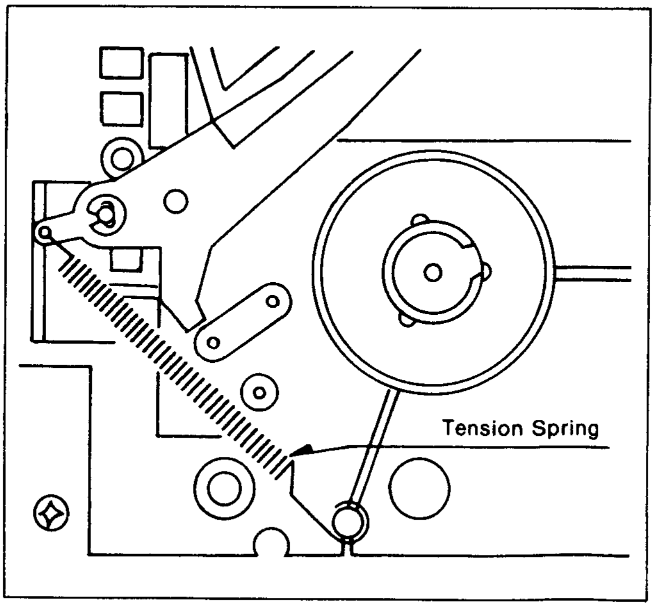


Figure M26

4-3-2. HEIGHT ADJUSTMENT OF THE REEL TABLES

<<TOOL>>

Post Adjustment Plate ; VFK0191
Reel Table Height Gauge ; VFK0190

<<SPEC>>

0 - 0.15mm

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero "0" as shown in Figure M27.

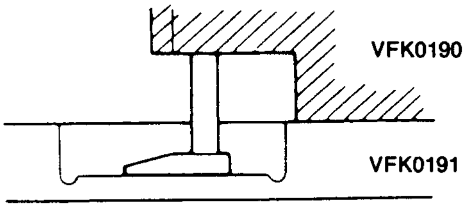


Figure M27

4. Measure the height of the top surface of either Reel Table and note the difference in height from the plate cut-out. (Figure M27 and M28) Repeat this procedures for the other Reel Table.

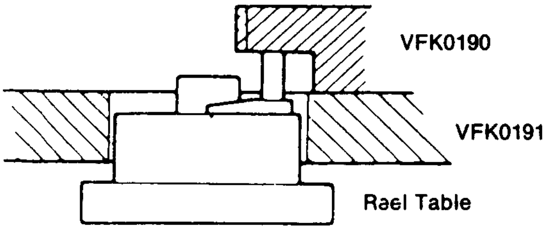


Figure M28

5. If the difference of Supply Reel table is more than 0.15mm higher or lower, replace the Supply Reel table. When the difference of Take Up Reel table is more than 0.15mm higher or lower, adjust nut (A)(Figure M29) so that measurement becomes the spec. If you can not adjust to the spec., replace Take Up Reel table.

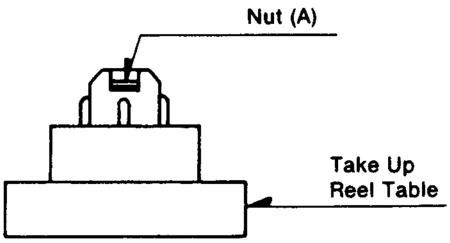


Figure M29

<<NOTE>>

When replacing the tables, the DD Reel Unit needs to be removed from the chassis.
Remove 6 screws and carefully lift it out as shown in Figure M30.

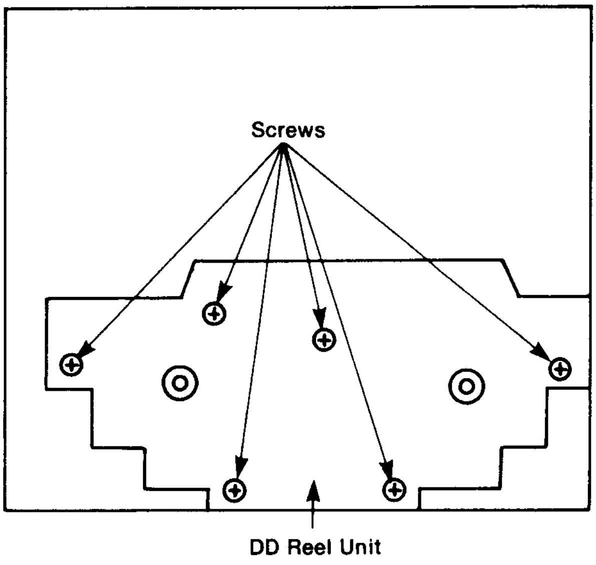


Figure M30 Bottom View of DD Reel Unit

<<NOTE>>

When assembling the DD Reel Unit, slide a Main Rod to far left side by rotating the Center Gear, and then screw the 6 screws.

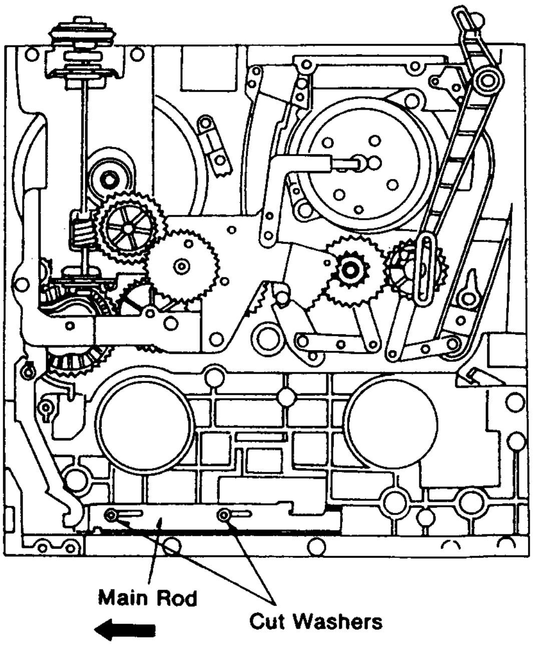


Figure M31

4-3-3. ADJUSTMENT OF THE CAPSTAN THRUST GAP

<<SPEC>>
0.5mm +/- 0.05mm

1. Tighten the Thrust Adjust Screw slowly until the Capstan Rotor starts turning.

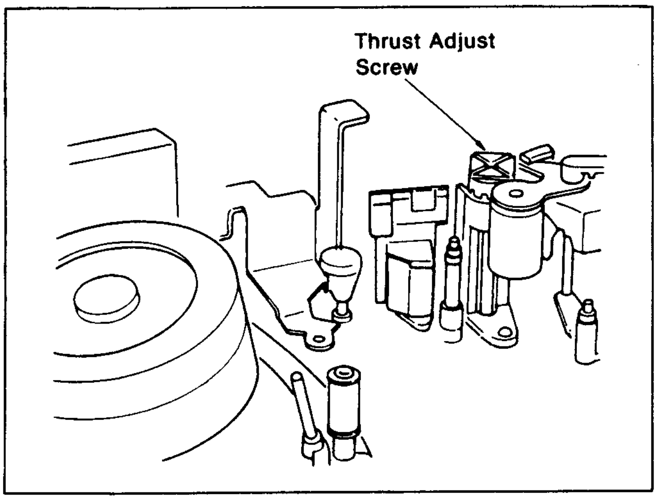


Figure M32

2. At the point where the Capstan Rotor starts turning, tighten the Thrust Adjust Screw another 180 degree clockwise as shown in Figure M33.

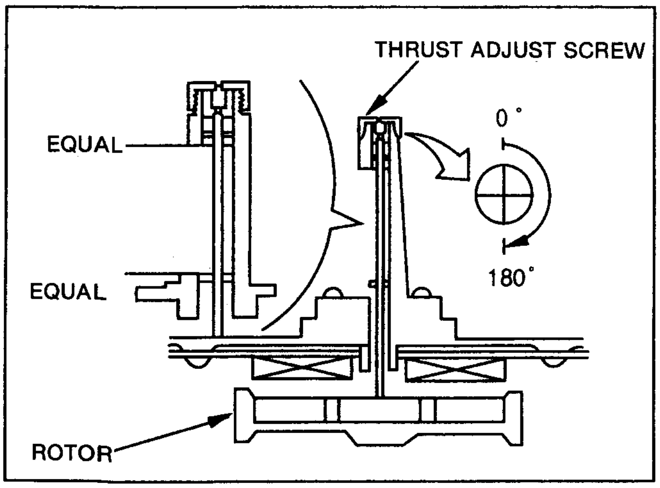


Figure M33

3. Upon completion of above procedures, confirm that these 2 Oil Seals are positioned as shown in Figure M33. And then, wipe off the Capstan Shaft to remove oil, grease and dust.

4-3-4. MEASUREMENT AND ADJUSTMENT OF THE BRAKE TORQUE

<<TOOL>>
Torque Gauge ; VFK0133
Adapter for Gauge ; VFK0134

1. Remove the top cover and the cassette compartment.
2. Attach the adapter to the torque gauge and place the deck in STOP mode (Subloading mode).
3. Place the torque gauge on the reel table as shown in Figure M35. The weight of the gauge should not rest on the reel table.
4. Turn the torque gauge in the direction indicated in Figure M36 until the brake begins slipping and read the gauge.

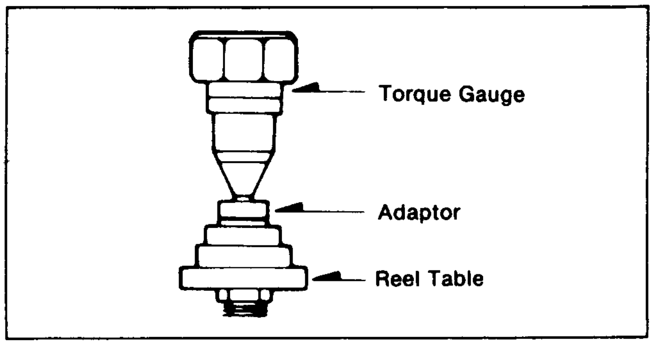
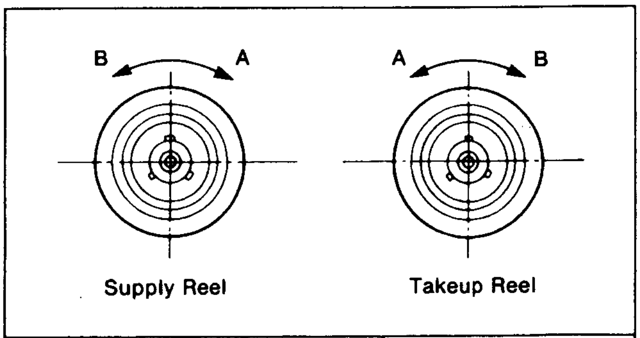


Figure M35 Measuring Method



	A	B
Takeup	more than 550g-cm	more than 50g-om
Supply		more than 40g-cm

Figure M36 Specification of Brake Torque

5. If it is out of specification, replace the Brake Spring.

<<NOTE>>
If the proper brake torque cannot be obtained by replacing the Brake Spring, clean the braking surface of the reel table with a soft cloth and re-measure the brake torque. If it's still out of specification, replace the Main Brake (S) or (T) Unit.

4-3-5. ADJUSTMENT OF PRESSING FORCE OF PRESSURE ROLLER UNIT

<<TOOL>>
Fan Type Tension Gauge ; VFK66
VHS 180 min. Cassette Tape

<<SPEC>>
1,050g +/- 230g

1. Remove the Cassette Compartment.
2. Play back the end portion of VHS (180 min.) tape.
3. Set Fan Type Tension Gauge to the part (A) of Pinch Roller Unit (Figure M37).
4. Press the Arm with the Gauge, in the direction indicated by the arrow as show in Figure M37.
5. Confirm the reading of the Tension Gauge is 1,050g +/ - 230g at the moment of the tape stop.
6. If it is out of spec, replace the Pinch Pressure Spring.
7. Place the deck in normal P.B. and Rev mode.
8. Confirm the reading of the clearance (T) is more than 0.5mm. (Figure M38).
9. If it is out of spec, replace the Pressure Roller Unit.

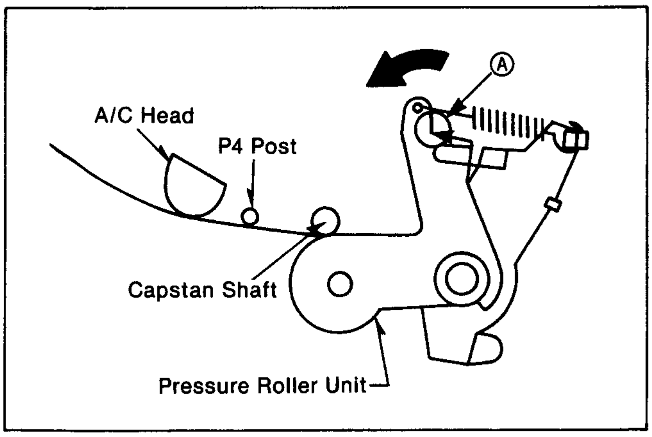

Ⓐ
A/C Head
P4 Post
Capstan Shaft
Pressure Roller Unit

Figure M37

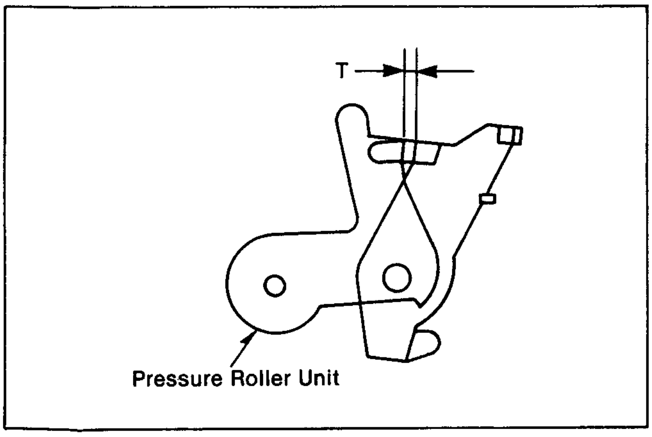

T
Pressure Roller Unit

Figure M38

4-3-6. ADJUSTMENT OF REV TENSION SENSOR POSITION

<<TOOL>>
Tension Sensor Adj. Fixture ; VFK0806
Tension Post Adj. Plate ; VFK0236
Fine Adj. Screwdriver ; VFK0330
Digital Volt Meter ; Purchase locally

<<NOTE>>
Assemble a Tension Sensor Adjustment Fixture (VFK0806) and a Tension Post Adj Plate (VFK0236) as shown in Figure M39.

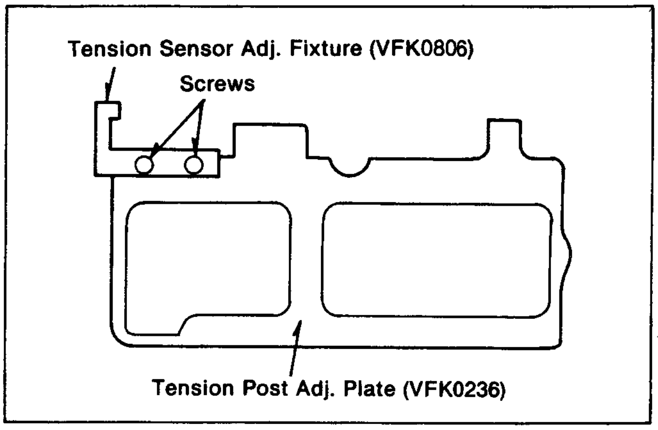

Tension Sensor Adj. Fixture (VFK0806)
Screws
Tension Post Adj. Plate (VFK0236)

Figure M39

1. Remove the Top Plate and Cassette Holder Unit. (refer to Disassemble Procedures)
2. Disconnect the 4-pin and 2-pin flat wire from the connector P1508.
3. Connct two wires of 4-pin flat wire to the pin 3 and 4 of the connector P1508 as shown in Figure M40.

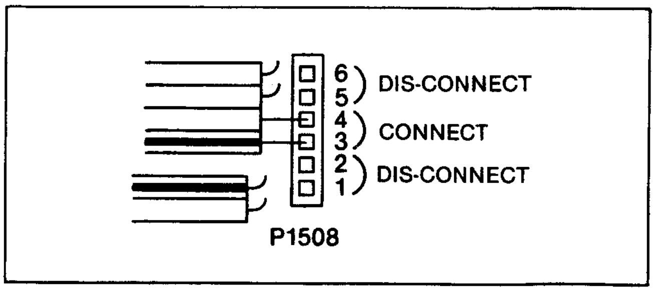

6
5
DIS-CONNECT
4
3
CONNECT
2
1
DIS-CONNECT
P1508

Figure M40

4. Push the Sub Wiper Arm (R) to direction of Cassette loading.
   Then the Sub Wiper Arm (R) goes down itsedlf and mode of machine change to STOP.
5. Turn the Power switch off.
6. Remove the Cassette Compartment (refer to Disassmbly Procedures) and disconnect 4Pin flat wire form P1508.
7. Connect the V.T.V.M. or D.V.M. to TP2501 on the Reel Servo C.B.A.

8. Place the Tension Post Position Adjustment Plate with the Fixture over the reel tables as shown in Figure M41.

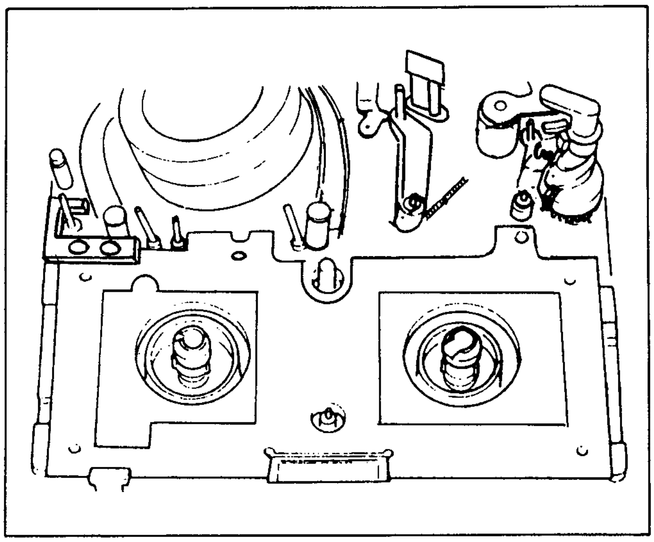


Figure M41

9. Turn the Power switch on.
10. Set the Time Mode to 480H.
11. Slightly loosen 2 screws (C). Insert a Fine Adj. Screwdriver in the hold (D). (Figure M42)

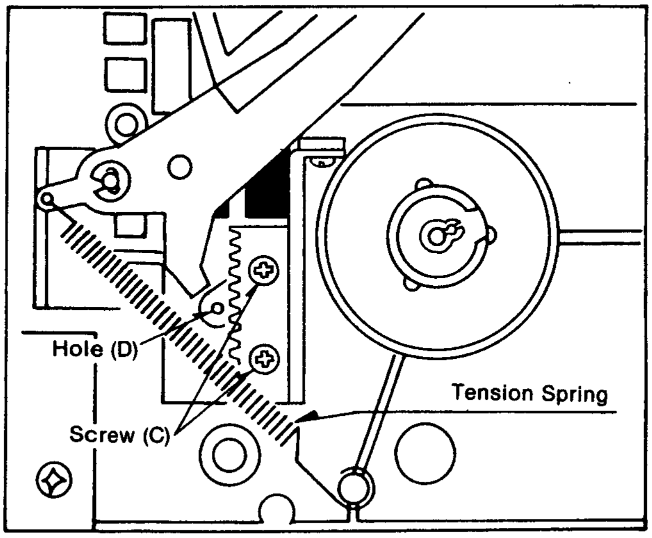


Figure M42

12. Press the PLAY button.
13. Adjust the Rev Sensor Position so that measurement becomes D.C. 2.0V to 2.5V.
14. Tighten the 2 screws (C).
15. Remove the Tension Sensor Fixture.
16. Reinstall the Cassette Compartment.
17. Confirm Playback picture (Rev Playback mode, Playback mode etc.)

4-3-7. ADJUSTMENT OF FG HEAD GAP

<<SPEC>>
0.17mm to 0.18mm

1. Slightly loosen 2 screws. (Figure M43)
2. Put the paper which is used for cover page of this volume into the gap between F.G. Head and Capstan rotor. (The thickness of the cover page is approx. 0.17mm).
3. After adjustment, tighten 2 screws.

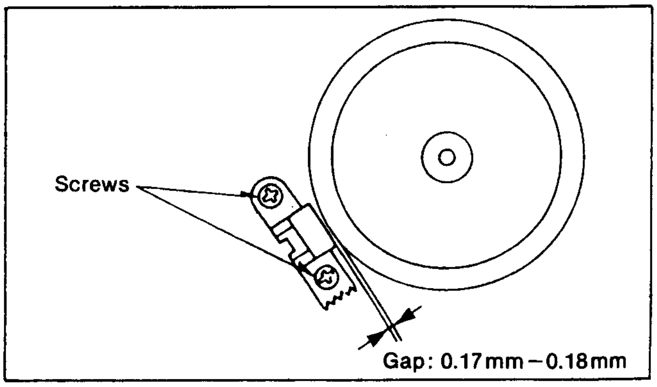


Figure M43

<<NOTE>>
Do not touch the surface of rotor and keep any magnetizable material away.

4-4. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch.
Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.
If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped.
And it will result being damaged at any mechanical or electrical parts.
The overall mechanical condition (alignment) of bottom and top view are shown in Figure M44 and Figure M45. This mechanical adjustment is performed in the STOP mode.

4-4-1. CONFIRMATION OF ALIGNMENT CONDITION

1. Remove the Loading Belt.
2. Unscrew 4 screws and remove the Gear Base Unit.(Figure M44)
3. Turn the Center Gear to counter-clockwise until 2 big holes of Center Gear align with 2 big holes of Retainer Gear and Ring Gear and Chassis as shown in Figure M46.
4. Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam as shown in Figure M45.
5. P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.

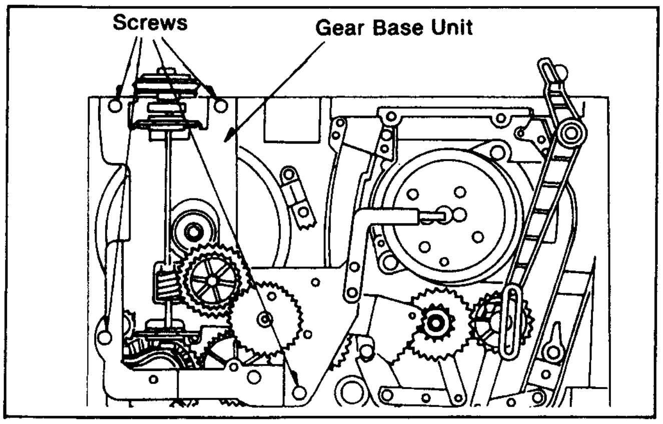

Screws
Gear Base Unit

Figure M44

6. Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 oclock position.
7. Pressure Roller Unit is UP position.

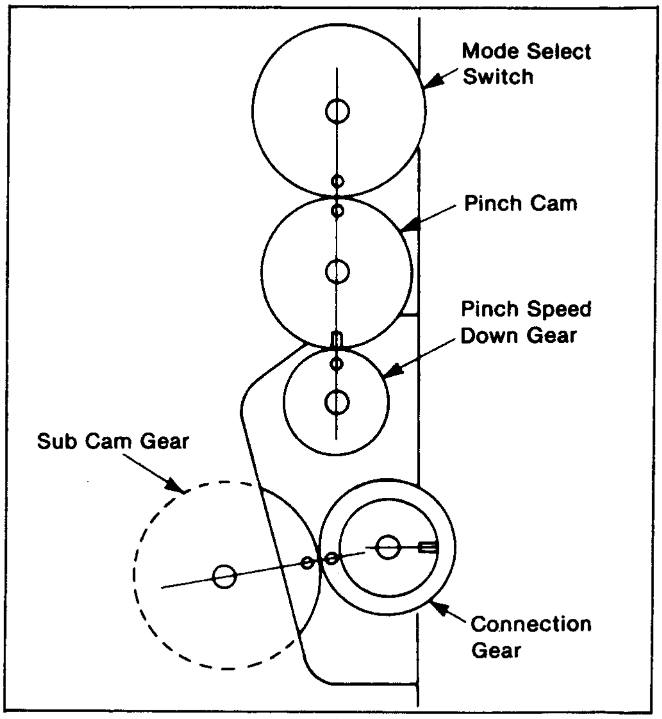

Mode Select Switch
Pinch Cam
Pinch Speed Down Gear
Sub Cam Gear
Connection Gear

Figure M45 Top View of Overall IQ-Mechanical Condition

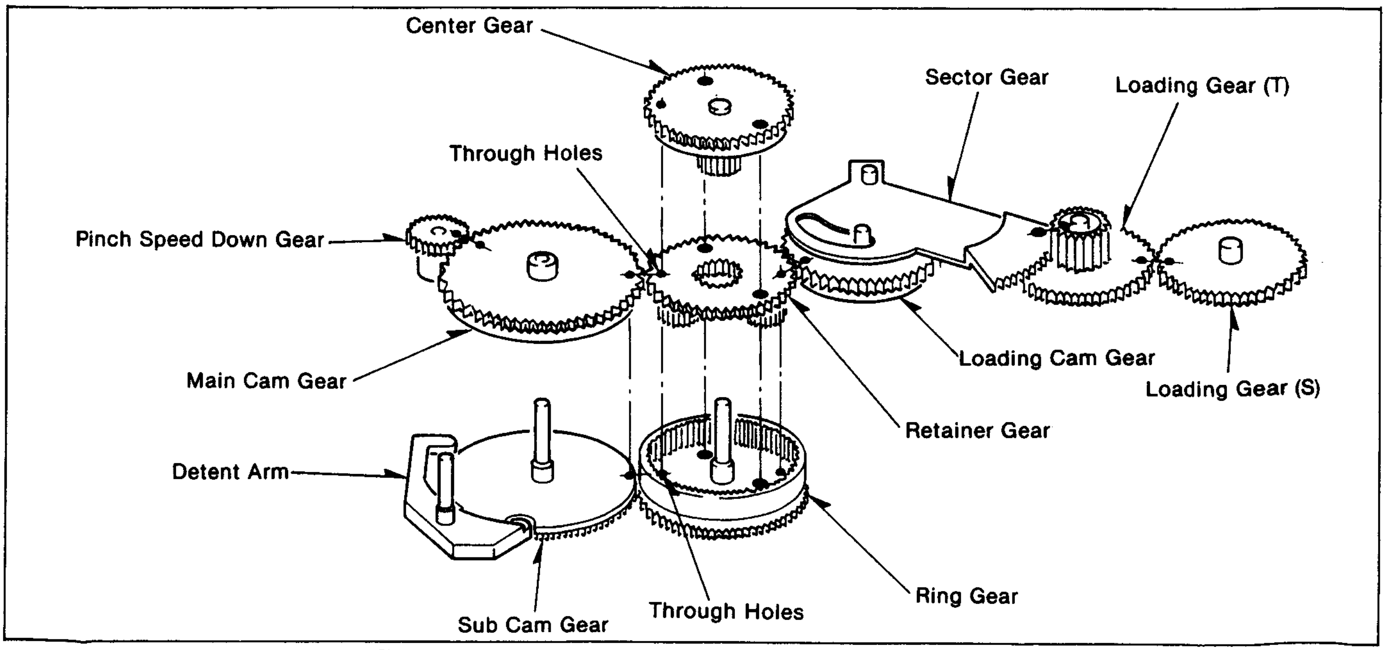

Center Gear
Sector Gear
Loading Gear (T)
Through Holes
Pinch Speed Down Gear
Main Cam Gear
Loading Cam Gear
Loading Gear (S)
Retainer Gear
Detent Arm
Ring Gear
Sub Cam Gear
Through Holes

Figure M46 Bottom View of Overall Mechanical Condition

4-4-2. ASSEMBLY PROCEDURES OF SUB CAM GEAR, RING GEAR AND DETENT ARM

1. Install the Ring Gear so that the two holes on the Ring Gear align with the two holes on the chassis as shown in Figure M47.
2. Install the Sub Cam Gear so that the large hole on Sub Cam Gear aligns with the hole on chassis. Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M47.
3. Confirm that the small hole on Sub Cam Gear is aligned with the small hole on Connection Gear as shown in Figure M45 (In case of the Connection Gear is already installed).
4. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M47.

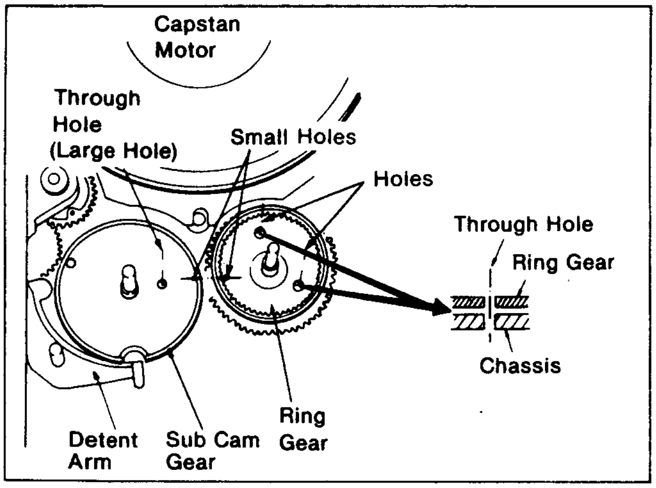

Capstan Motor
Through Hole (Large Hole)
Small Holes
Holes
Through Hole
Ring Gear
Chassis
Detent Arm
Sub Cam Gear
Ring Gear

Figure M47

4-4-3. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

1. Install the Main Cam Gear onto the Sub Cam Gear so that the small hole on the Main Cam Gear aligns with small hole on the Ring Gear as shown in Figure M48.
2. Insert a retaining ring.
3. Install the Pinch Speed Down Gear from top side of chassis so that the small hole on the Main Cam Gear aligns with small hole on the Pinch Speed Down Gear as shown in Figure M48.

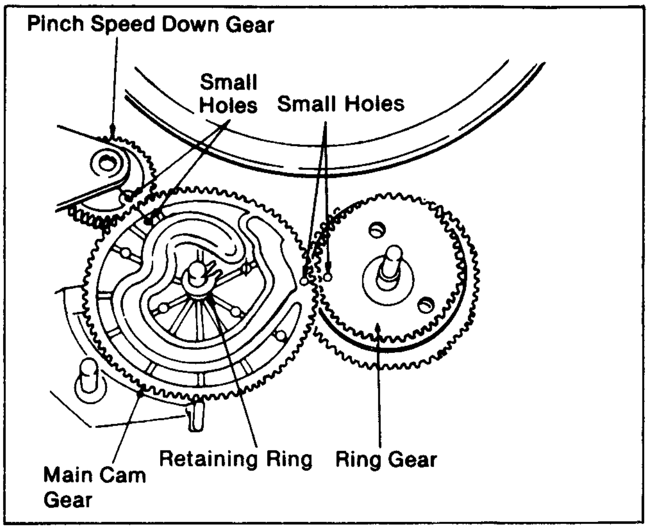

Pinch Speed Down Gear
Small Holes
Small Holes
Main Cam Gear
Retaining Ring
Ring Gear

Figure M48

4-4-4. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

1. Install the Retainer Gear onto the Ring Gear so that the two holes on the Retainer Gear align with the two holes on the Ring Gear, at this time, small hole on the Main Cam Gear should aligns with small hole on the Retainer Gear as shown in Figure M49.
2. Install the Loading Cam Gear so that the small hole which is directly outside of the large hole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M49.

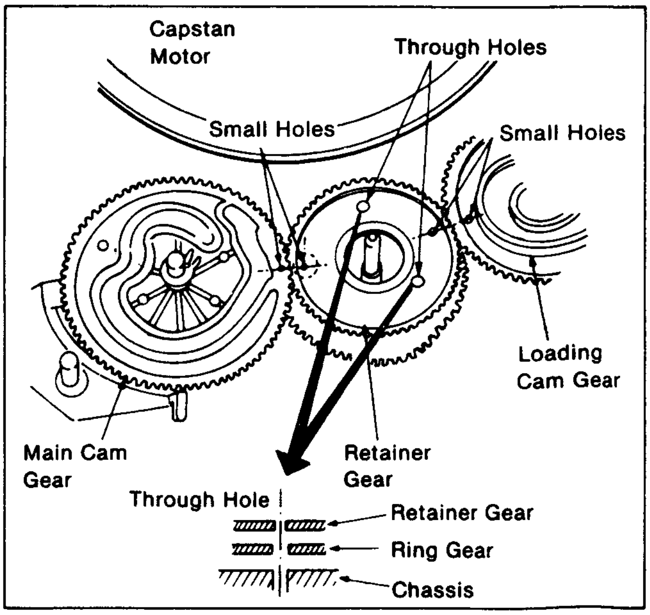

Capstan Motor
Through Holes
Small Holes
Small Holes
Loading Cam Gear
Main Cam Gear
Retainer Gear
Through Hole
Retainer Gear
Ring Gear
Chassis

Figure M49

4-4-5. ASSEMBLY PROCEDURES OF CENTER GEAR

1. Softly Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M50.

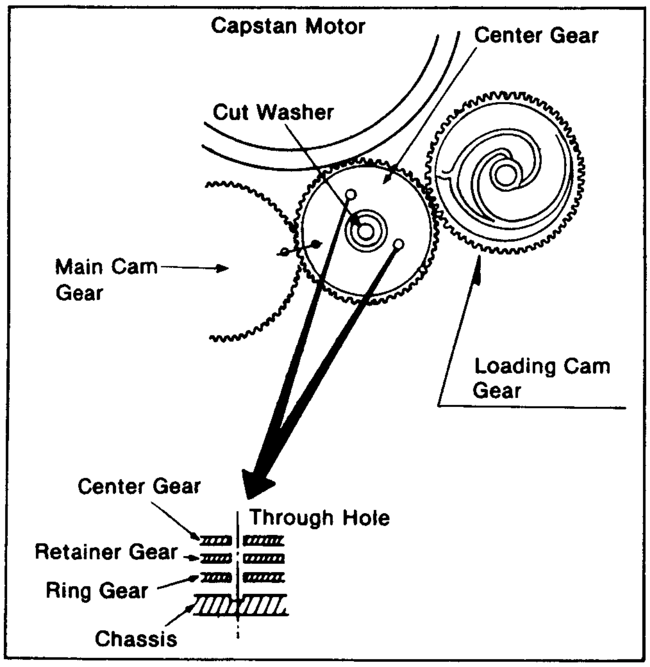

Capstan Motor
Center Gear
Cut Washer
Main Cam Gear
Loading Cam Gear
Center Gear
Through Hole
Retainer Gear
Ring Gear
Chassis

Figure M50

4-4-6. ASSEMBLY PROCEDURES OF MAIN LEVER AND CAM FOLLOWER ARM UNIT

1. Install the Main Rod and then insert the cut washers as shown in Figure M51.
2. Install the Cam Follower Arm so that the pin of the Cam Follower Arm inserts into the groove of the Main Cam Gear and also inserts into the slot on the Main Rod, insert the retaining ring.

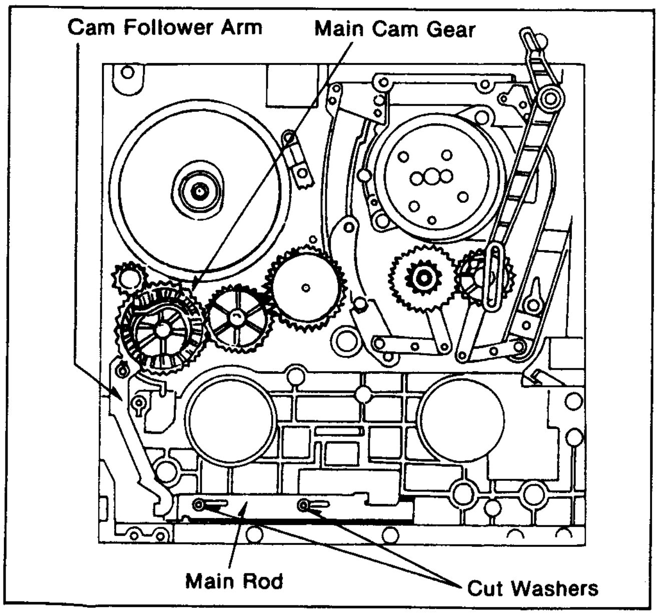

Cam Follower Arm
Main Cam Gear
Main Rod
Cut Washers

Figure M51

4-4-7. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR

1. Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole on the Loading Gear (T) aligns with the outer hole on the Loading Gear (S) as shown in Figure M52.
2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T).
3. Insert 3 retaining rings as shown in Figure M53.

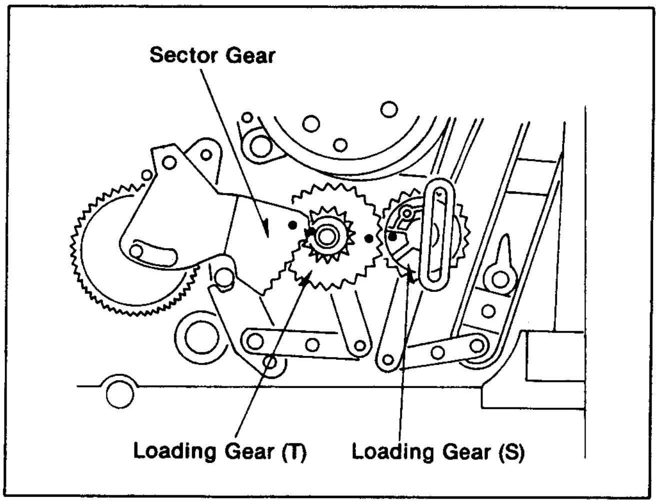

Sector Gear
Loading Gear (T)
Loading Gear (S)

Figure M52

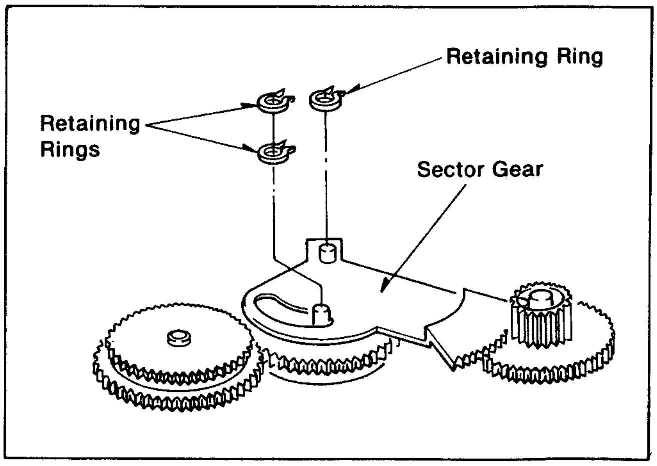

Retaining Ring
Retaining Rings
Sector Gear

Figure M53

4-4-8. ASSEMBLY PROCEDURES OF CONNECTION GEAR

<<NOTE>>
Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (Figure M45).

1. Install the Connection Gear so that the small hole on the Connection Gear aligns with the small hole on the Sub Cam Gear as shown in Figure M54.

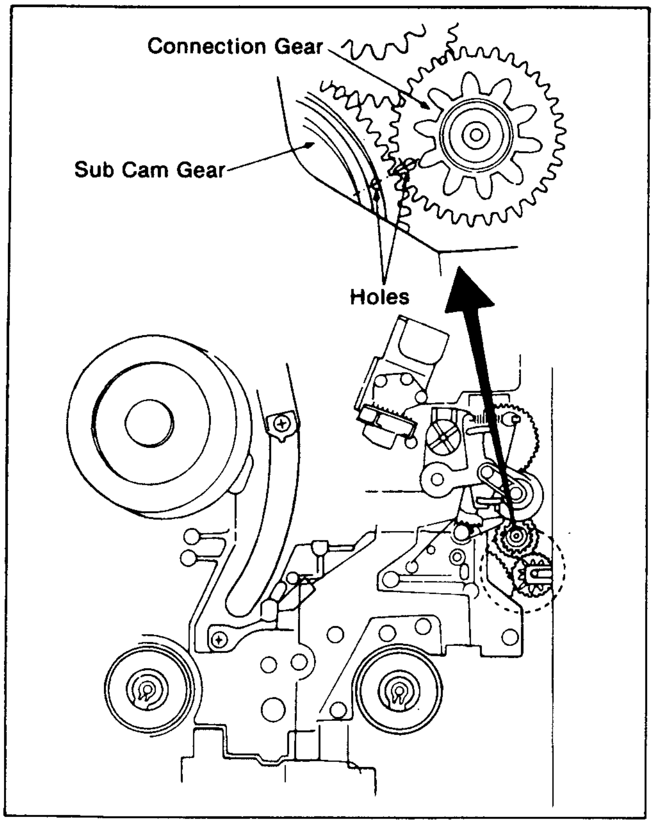

Connection Gear
Sub Cam Gear
Holes

Figure M54

4-4-9. ASSEMBLY PROCEDURES OF MODE SWITCH AND P5 PULL OUT SECTOR GEAR

1. Turn the Center Gear to unloading position.
2. Install the Mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
3. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of gear at P5 Arm as shown in Figure M55.

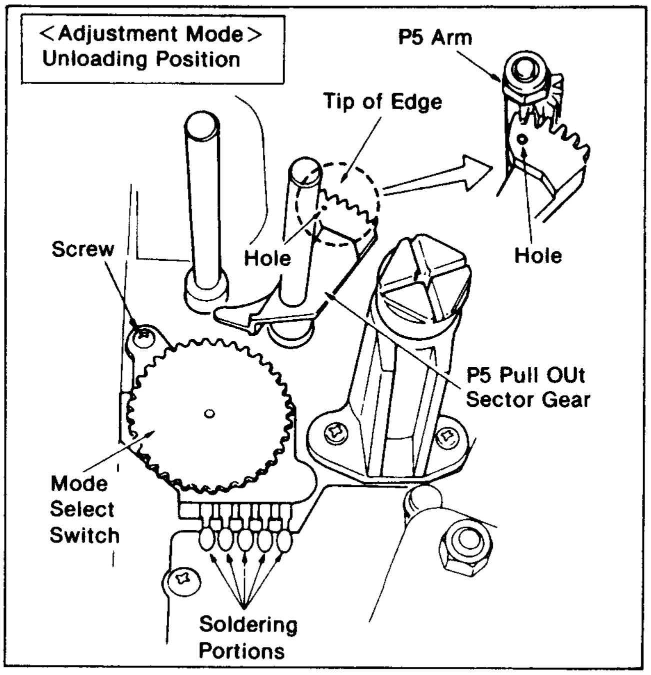

<Adjustment Mode>
Unloading Position
P5 Arm
Tip of Edge
Screw
Hole
Hole
P5 Pull OUt
Sector Gear
Mode
Select
Switch
Soldering
Portions

Figure M55

4-4-10. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

1. Install the Pinch Cam while pushing the P5 post forward. The gear of the Pinch Cam should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear as shown in Figure M56.
2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

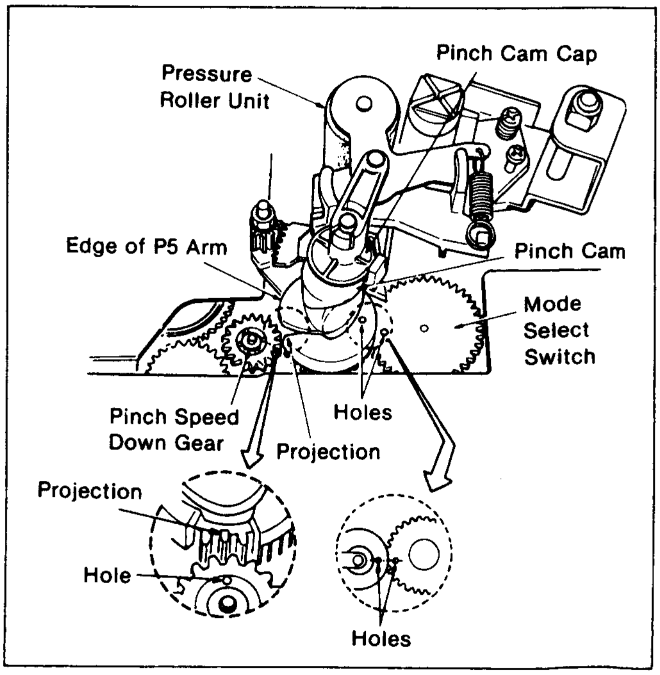

Pinch Cam Cap
Pressure
Roller Unit
Edge of P5 Arm
Pinch Cam
Mode
Select
Switch
Pinch Speed
Down Gear
Holes
Projection
Projection
Hole
Holes

Figure M56

4-4-11. ASSEMBLY PROCEDURES OF GEAR BASE UNIT

1. Install the Gear Base Unit and screw 4 screws as shown in Figure M57.

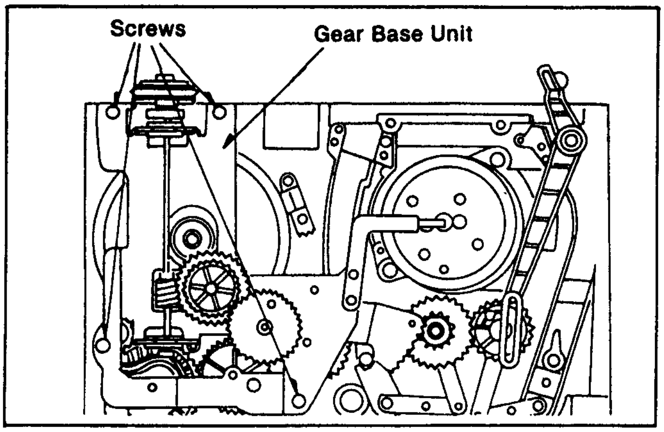


Figure M57

<<NOTE>>

The Gear Base Unit has 2 gears and wormshaft. There is no adjustment for these gears.

4-4-12. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP Alignment Condition

1. Turn the Wormshaft counter-clockwise or clockwise until mechanism is placed into the Alignment Condition as following conditions.
   - a) Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam. (Figure M56)
   - b) P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
   - c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear (Figure M54) and rectangular mark on the Connection Gear should be at a 3 oclock position.
   - d) Pressure Roller Unit is UP position.

B. Confirmation of Cassette Compartment

1. Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M58.

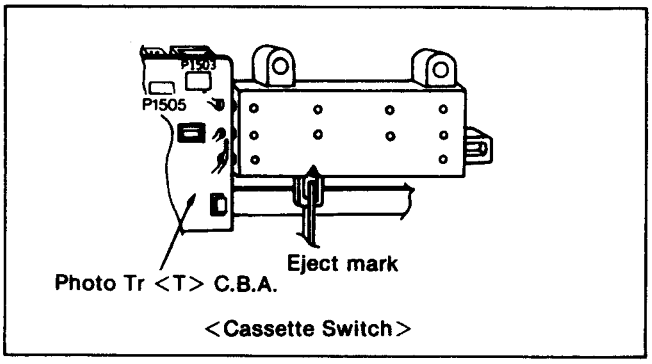


Figure M58

2. Remove 3 screws (A) as shownin Figure M59.
3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Figure M60.

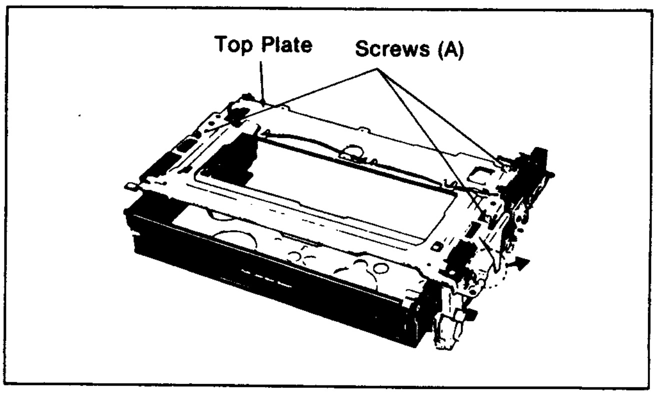


Figure M59

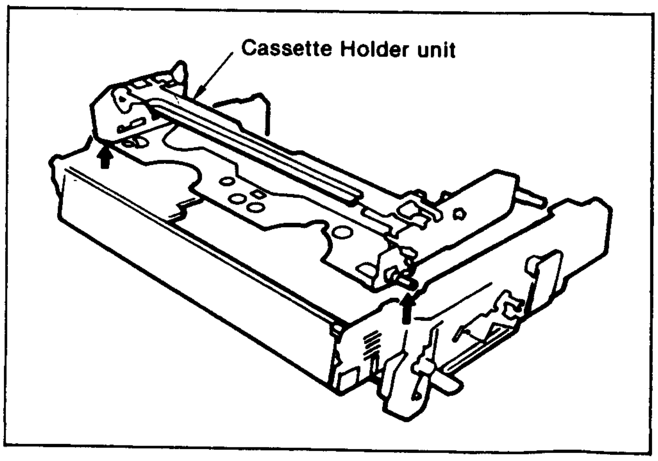


Figure M60 Removal of cassette holder unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP) completelyas shown in Figure M61 and keepit.
   In this position, the arrow on the Sub Wiper Arm (R) should align with the arrow on the Rack (A)(1) Unit as shown in Figure M62.

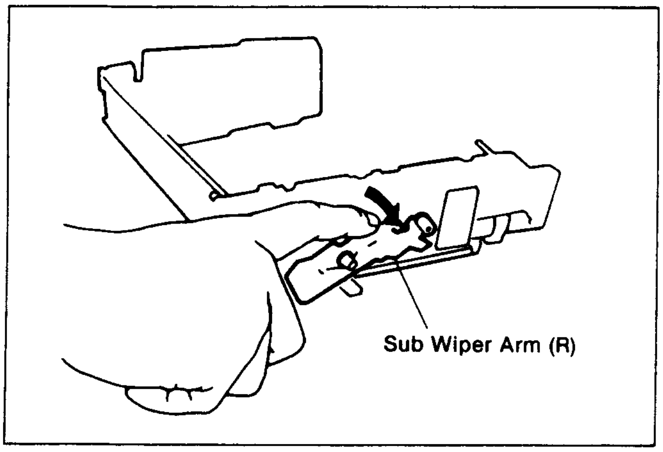

Sub Wiper Arm (R)

Figure M61

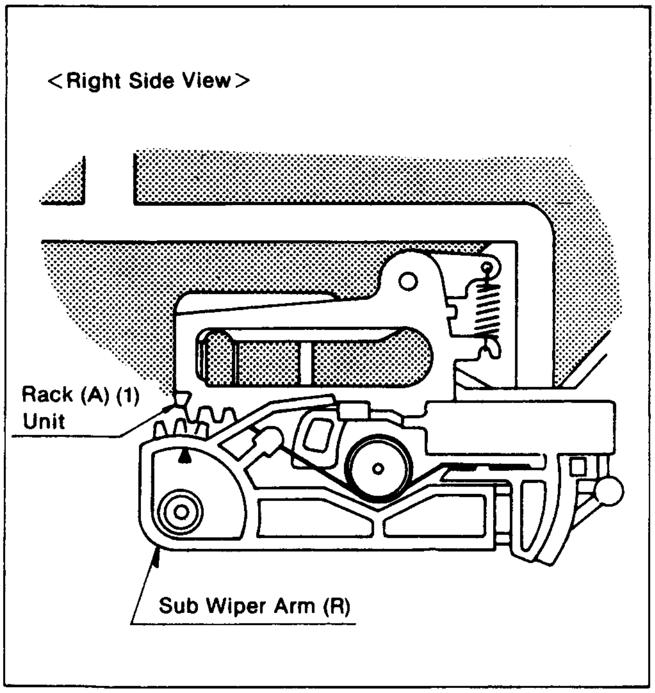

<Right Side View>
Rack (A) (1) Unit
Sub Wiper Arm (R)

Figure M62

6. If the Cassette Compartment is not aligned, re-alignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly. This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

1. Bring loading mechanism to the STOP (Sub-load) position.
2. Confirm that the chassis is aligned properly for Alignment Condition as shown in Figure M45 and M46.
3. Put the Sub Wiper Arm (R) in its full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plate).
4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M63 and M64.

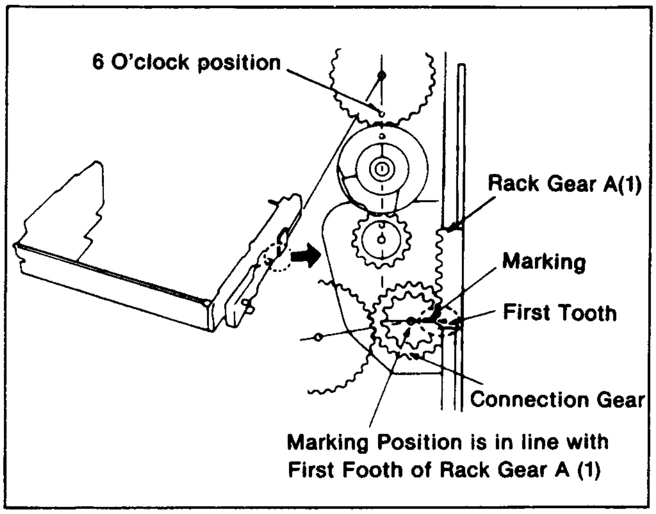

6 O'clock position
Rack Gear A(1)
Marking
First Tooth
Connection Gear
Marking Position is in line with First Footh of Rack Gear A (1)

Figure M63

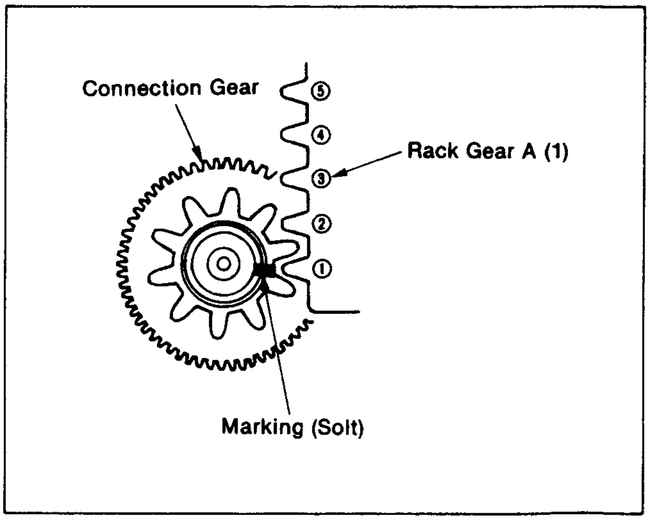

Connection Gear
⑤
④
③
②
①
Rack Gear A (1)
Marking (Solt)

Figure M64

5. Tighten the 4 screws (D) as shown in Figure M65.

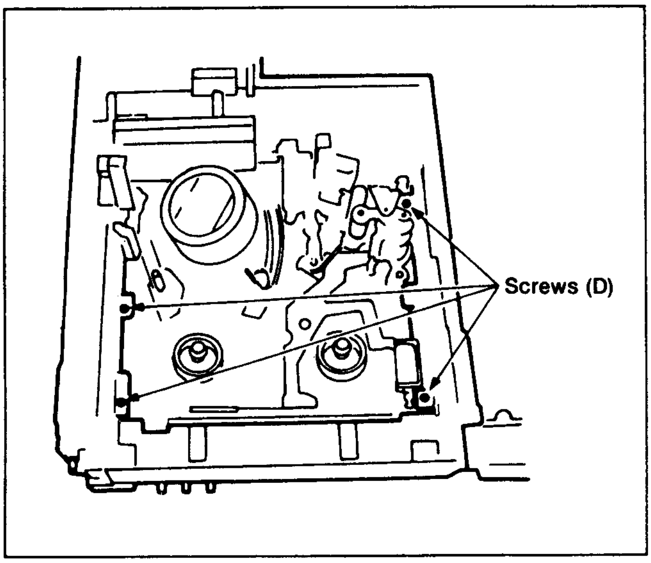


Figure M65

6. Manually move the loading mechanism toward the EJECT position.
7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (In the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base(Figure M66).
8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette Holder should drop into place if the Sub Wiper Arms are portioned as called for in step 7.

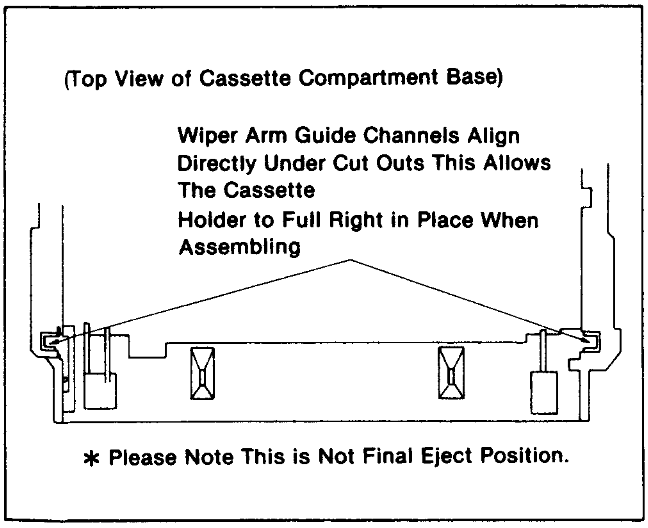

(Top View of Cassette Compartment Base)
Wiper Arm Guide Channels Align Directly Under Cut Outs This Allows The Cassette Holder to Full Right in Place When Assembling
* Please Note This is Not Final Eject Position.

Figure M66

<<NOTE>>
For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M67.

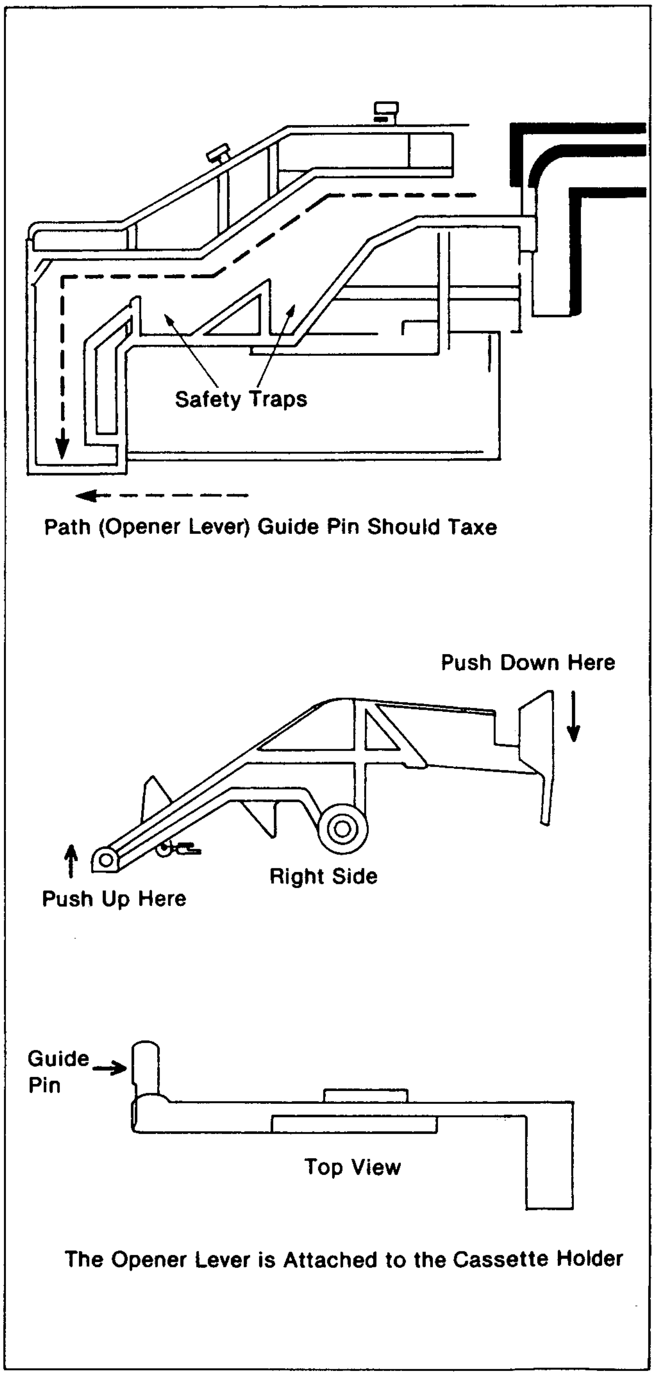

Safety Traps
Path (Opener Lever) Guide Pin Should Taxe
Push Down Here
Push Up Here
Right Side
Guide Pin
Top View
The Opener Lever is Attached to the Cassette Holder

Figure M67 Right Side Plate

9. Install the top plate on the Cassette Compartment Base and tighten the 2 screws (A) as shown in Figure M59.
10. Manually confirm that front loading and main loading run smoothly. Also confirmEJECT before power is applied.

Section 5

ELECTRICAL ADJUSTMENTS

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LOCATION OF TEST POINTS AND CONTROLS **5-8**

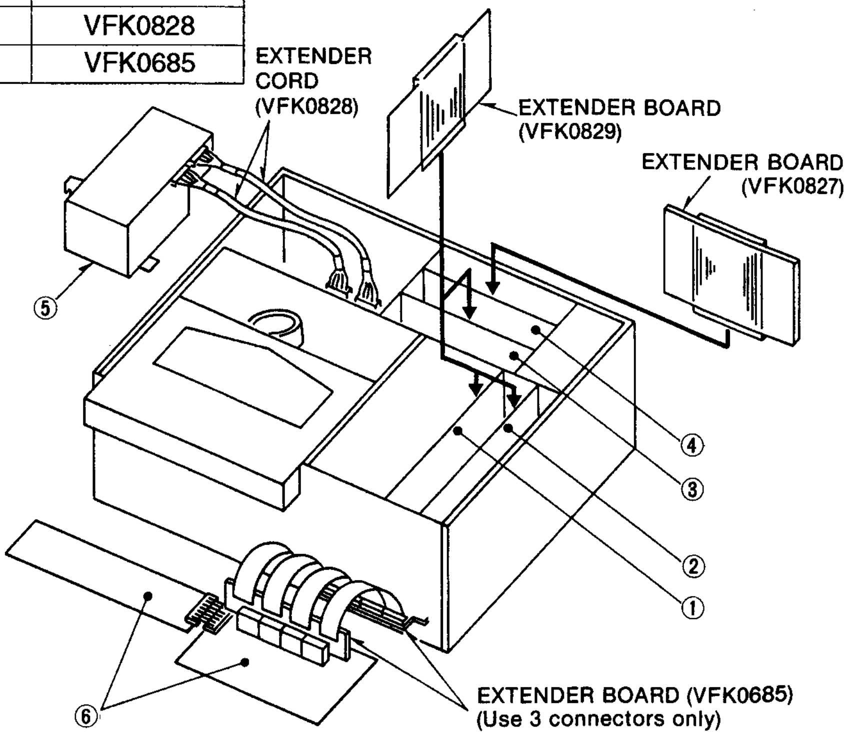
5-1. TEST & SERVICE EQUIPMENT

No.	EQUIPMENT	CAPACITY
1	VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)	0.001 to 50V
2	Dual-Trace Oscilloscope (with Probes)	0.005 to 50V/div, DC to 20MHz
3	Frequency Counter	0 to 10MHz
4	Sinewave Signal Generator (RC Oscillator)	0 to 10MHz
5	Video Sweep Generator	0 to 10MHz
6	Waveform Monitor	
7	Video Signal Generator (Composite)	Colour Bar / Multi Burst / Sin^2 Pulse & Bar etc.
8	Spectrum Analyzer	
9	Vector Scope	
10	Colour Monitor TV	
11	VHS Alignment Tape (VFM8180HADH)	
12	Extender Board (VFK0827)(32Pin)	
13	Extender Board (VFK0829)(64Pin)	

5-2. HOW TO USE OF THE EXTENDER BOARD; VFK0827 VFK0829

Please use the Extender Boards (VFK0827, 0829) for adjusting or checking of following P.C.Boards.

NO.	P.C.BOARD	EXTENDER
1	VIDEO (2) C.B.A.	VFK0829
2	VIDEO (3) C.B.A.	
3	SYSCON C.B.A.	
4	AUDIO C.B.A.	VFK0827
5	POWER SUPPLY UNIT	VFK0828
6	FRONT (1), (2) C.B.A.	VFK0685


EXTENDER CORD (VFK0828)
EXTENDER BOARD (VFK0829)
EXTENDER BOARD (VFK0827)
⑤
④
③
②
①
⑥
EXTENDER BOARD (VFK0685) (Use 3 connectors only)

5-3. ADJUSTMENT PROCEDURES

5-3-1. TIME DATE CLOCK ADJ. (1)

BOARD	FRONT 1 C.B.A.
TP	TP6601
ADJ.	CT6602
TAPE	
INPUT	
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC.	122.070 ± 0.001µS

1. Connect the jumper wire between TP6002 and TP6003 on the System control C.B.A.
2. Set the PROGRAM SW(SW21) to "ADJ" side on the Front 2 C.B.A..
3. Press the H.M(Hour Meter) button on the Front 2 C.B.A..
4. Connect the Frequency counter to TP6601 and TPG.
5. Adjust CT6602 so that 122.070 ± 0.001µS in period mode.
6. After this adjustment, remove the jumper wire from TP6002 and TP6003.

5-3-2. TIME DATE CLOCK ADJ. (2)

BOARD	FRONT 1 C.B.A.
TP	TP6601
ADJ.	CT6601
TAPE	
INPUT	
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC.	1048.580 ± 0.006KHz

<<NOTE>>

To achieve the adjustment results, warm up the unit for more than 20 minutes before this adjustment.

1. Connect the Frequency counter to TP6601 and TPG.
2. Adjust CT6601 so that F=1048.580 ± 0.006KHz.

5-3-3. PG SHIFTER ADJ.

BOARD	SERVO C.B.A
TP	TP8001 (VIDEO 2 C.B.A.), VIDEO OUT
ADJ.	VR2002
TAPE	VFM8180HADH PORTION: 2
INPUT	
MODE	PLAY <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	6.5 ± 0.5H

<<NOTE>>

Tape interchangeability adjustment should be always completed before this adjustment.

1. Play back the alignment tape at the portion 2.
2. Connect the oscilloscope to video output for CH-1 and TP8004 for CH-2.
3. Adjust VR2002 for 6.5H ± 0.5H as shown in Figure E1.

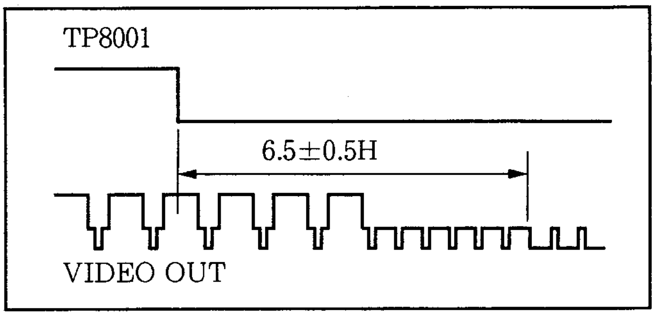


Figure E1

5-3-4. SLOW FREE RUN ADJ.

BOARD	SERVO C.B.A.
TP	TP6004 (SYSTEM CONTROL C.B.A.)
ADJ.	VR2001
TAPE	VFM8180HADH PORTION: 2
INPUT	
MODE	STILL <T-MODE:3H>
M.EQ	FREQUENCY COUNTER
SPEC.	490Hz ± 5Hz

1. Play back the alignment tape at the portion 2 and place the unit in still 3H mode.
2. Connect the jumper wire between TP6002 and TP6003 on the System Control C.B.A.
3. Connect the frequency counter to TP6004.
4. Adjust VR2001 so that F=490Hz ± 5Hz.
5. After this adjustment, remove the jumper wire from TP6002 and TP6003.

5-3-5. SLOW TRACKING ADJ.

BOARD	SERVO C.B.A.
TP	VIDEO OUT
ADJ.	VR2008(FWD), VR2007(REV)
TAPE	SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY, REV PLAY <T-MODE:24H>
M.EQ	MONITOR TV
SPEC.	NO NOISE BAR APPEAR

<<NOTE>>
This adjustment should be set the tracking fix position. (Push tracking UP/DOWN buttons at same time)

1. Record the colour bar signal on the 3H mode and play back the just recorded portion in 24H FWD mode.
2. Adjust VR2008 so that no Noise Bar appear on the Monitor TV.
3. Play back the just recorded portion in 24H REV PLAY mode.
4. Adjust VR2007 so that no Noise Bar appear on the Monitor TV.

5-3-6. V-LOCK ADJ.

BOARD	SERVO C.B.A.
TP	VIDEO OUT
ADJ.	VR2004
TAPE	SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	STILL <T-MODE:3H>
M.EQ	MONITOR TV
SPEC.	NO V-DANCING APPEAR

<<NOTE>>
Before this adjustment should be set the V-LOCK (VR2010 SERVO C.B.A.) to center position.

1. Record the colour bar signal on 3H mode.
2. Play back the just recorded portion in still mode.
3. Adjust VR2004 so that the V-dancing does not appear on the Monitor TV.
4. Confirm that the no V-dancing is appeared on the Monitor screen while 24H PLAY mode after completed this adjustment.

5-3-7. AGC LEVEL ADJ.

BOARD	VIDEO 3 C.B.A.
TP	TP3001
ADJ.	VR3002
TAPE	
INPUT	COLOUR BAR
MODE	STOP
M.EQ	OSCILLOSCOPE
SPEC.	2.0 ± 0.1Vp-p

1. Connect the oscilloscope to TP3001.
2. Slowly turn the adjustment VR3002 and adjust a luminance level as shown in Figure E2.

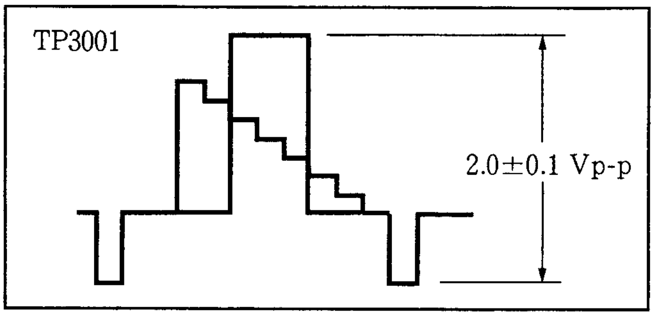


Figure E2

5-3-8. TIME DATE DISPLAY H POSITION ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ.	CT3002
TAPE	
INPUT	COLOUR BAR
MODE	STOP
M.EQ	MONITOR TV
SPEC.	SEE FIGURE E3

1. Set the T/D display ON and select display position to Right-Upper as shown in Figure E3.
2. Adjust CT3002 so that the " H" for time-mode is positioned as shown in Figure E3.

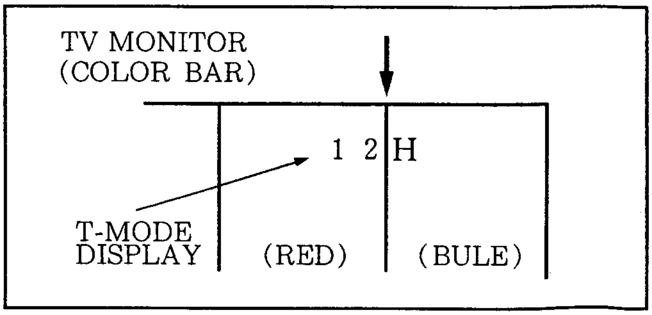


Figure E3

5-3-9. VIDEO RECORDING CURRENT ADJ.

BOARD	HEAD AMP C.B.A.
TP	TP507(HOT), TP508 (GND)
ADJ.	VR502(REC C), VR501(REC Y)
TAPE	BLANK TAPE
INPUT	COLOUR BAR
MODE	RECORDING <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	C:32 ± 2mVp-p, Y:130 ± 5mVp-p

1. Connect the oscilloscope to TP507 (HOT) and TP508 (GND).
2. Before chrominance recording current adjustment, luminance recording current (VR501) should be closed to observe the chrominance signal.
3. Adjust VR502 for 32 ± 2mVp-p as a cyan level of the chrominance signal as shown in Figure E4.
4. Next, adjust VR501 for 130 ± 5mVp-p as a luminance signal as shown in Figure E5.

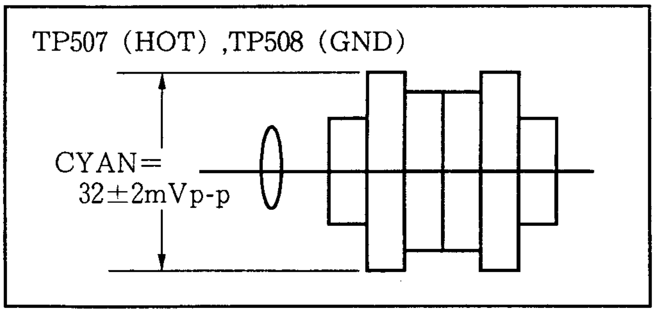


Figure E4

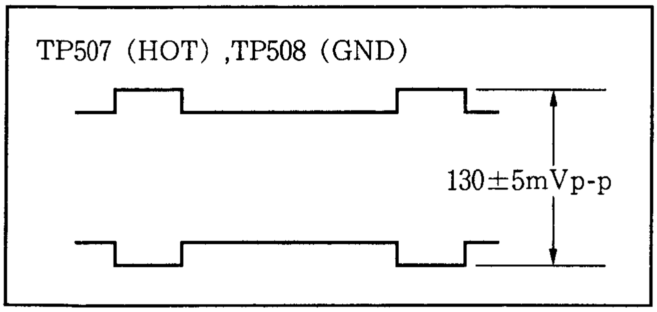


Figure E5

5-3-10. VIDEO PLAYBACK LEVEL ADJ.

BOARD	VIDEO 3 & 2 C.B.A.
TP	VIDEO OUT
ADJ.	VR3006(Y), VR8002(C)
TAPE	SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	Y: 1.0 ± 0.03Vp-p, C: 0.6 ± 0.06Vp-p

<<NOTE>>

This adjustment should be always completed after completion of all adjustment on the recording loop.

1. Record the colour bar signal on 3H mode.
2. Connect the oscilloscope to the video out with a 75 ohm termination.
3. Play back the just recorded portion.
4. Adjust VR3006 for 1.0 ± 0.03Vp-p as a luminance level as shown in Figure E6.
5. Adjust VR8002 for 0.6 ± 0.06Vp-p as a chrominance level as shown in Figure E6.

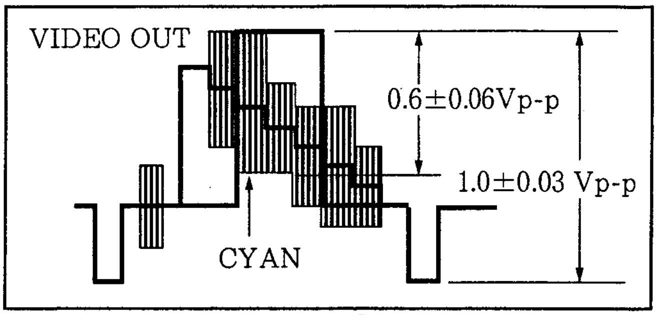


Figure E6

5-3-11. Y BALANCE ADJUSTMENT

BOARD	VIDEO 2 C.B.A.
TP	TP3003 (VIDEO 3 C.B.A.)
ADJ.	VR8001
TAPE	SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	LESS THAN 50mVp-p

1. Record the colour bar signal on 3H mode.
2. Play back the just recorded portion.
3. Connect the oscilloscope to TP3003 with capacitor(1000pF) as shown in Figure E7.
4. Adjust VR8001 so that the waveform becomes minimum as possible (less than 50mVp-p).

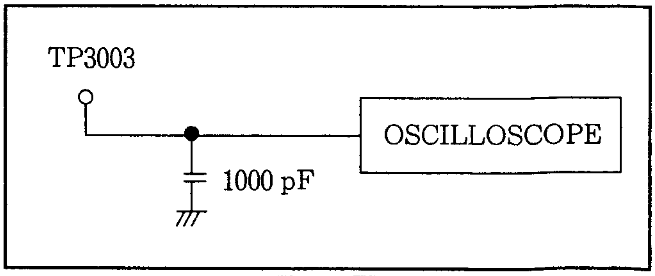


Figure E7

5-3-12. PLAY BACK FREQUENCY RESPONSE ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ.	VR3001
TAPE	SELF RECORDED TAPE
INPUT	30% SWEEP (WITHOUT BURST)
MODE	PLAY <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	100KHz : 2MHz = 5 : 5.0 ± 0.5 (B/W mode)

<<NOTE>>

Before this adjustment should be set the PICTURE VR to center position.

1. Set the sweep generator output as shown in Figure E8.
2. Supply the 30% sweep (without burst) signal to video input and recording in B/W mode.
4. Connect the oscilloscope to video out.
5. Play back the just recorded portion.
6. Adjust VR3001 so that the play back sweep level becomes 5 : 5.0 ± 0.5 at the marker points of 100KHz and 2MHz as shown in Figure E9. (Vary the vertical scope setting until the 100KHz level reaches 5 division.)

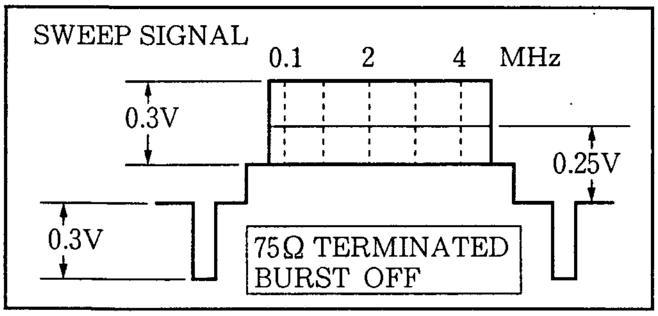


Figure E8

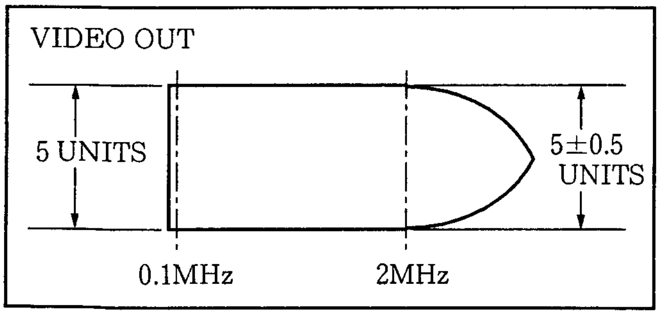


Figure E9

5-3-13. AUDIO BIAS CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	TP4001 (H), TP4002 (GND)
ADJ.	VR4002
TAPE	BLANK TAPE
INPUT	
MODE	RECORDING <T-MODE:3H>
M.EQ	V.T.V.M
SPEC.	2.6 ± 0.1mVrms

<<NOTE>>

Connect the jumper wire between audio input and GND.

1. Place the unit in recording mode.
2. Connect the V.T.V.M to TP4001 (HOT) and TP4002 (GND).
3. Adjust VR4002 for 2.6 ± 0.1mVrms.

5-3-14. AUDIO PLAYBACK LEVEL ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUT
ADJ.	VR4001
TAPE	SELF RECORDING TAPE
INPUT	SINE WAVE (1KHz, -10dB)
MODE	PLAY <T-MODE:3H>
M.EQ	V.T.V.M
SPEC.	PB LEVEL = E-E LEVEL ± 0.5dB

<<NOTE>>

Before this adjustment Tape Interchangeability Adjustment and Audio Current Adjustment should be completed.

1. Supply the sine wave signal (1KHz, -10dB) to the audio input and recording on 3H mode.
2. Play back just recorded portion.
3. Adjust VR4001 so that play back level equal with E-E level.

5-3-15. VITC DC LEVEL ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ.	VR3004
TAPE	BLANK TAPE
INPUT	COLOUR BAR
MODE	RECORDING <T-MODE:3H>
M.EQ	OSCILLOSCOPE
SPEC.	A : B = 100% : 0 ± 5%

<<NOTE>>

This adjustment should be performed only installed the AG-IA670 (option unit).

1. Set the VITC REC ON mode.
2. Recording the VITC and colour bar.
3. Adjust VR3004 so that A : B = 100% : 0 ± 5% as shown Figure E10.

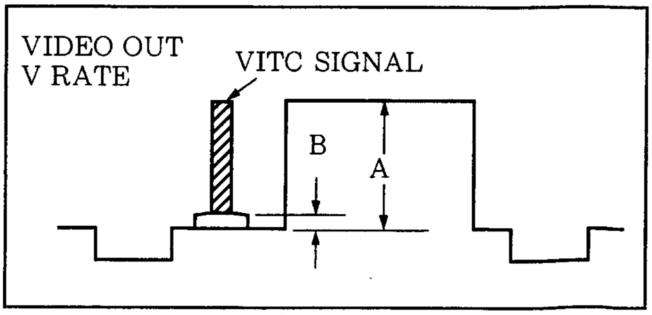
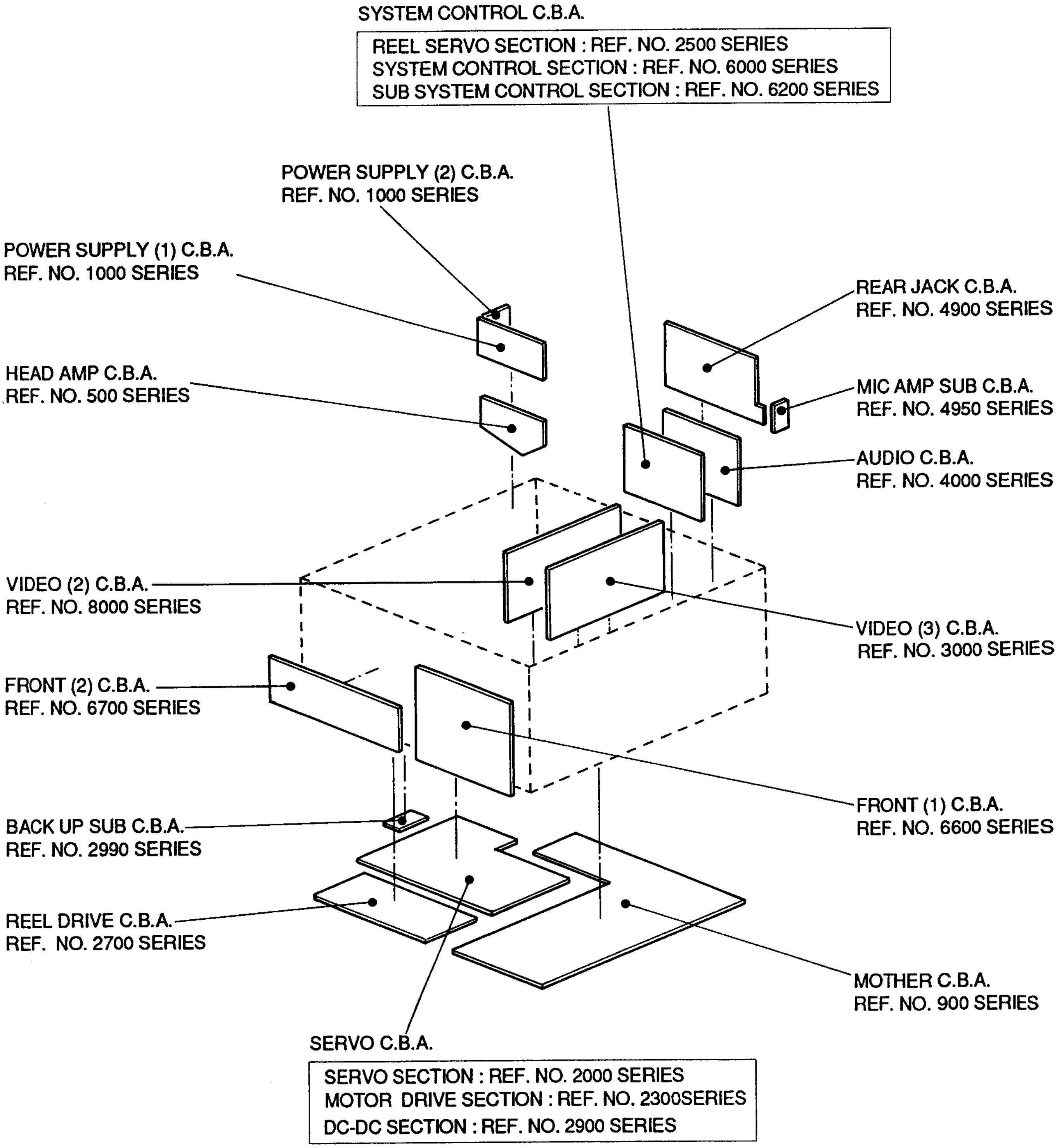


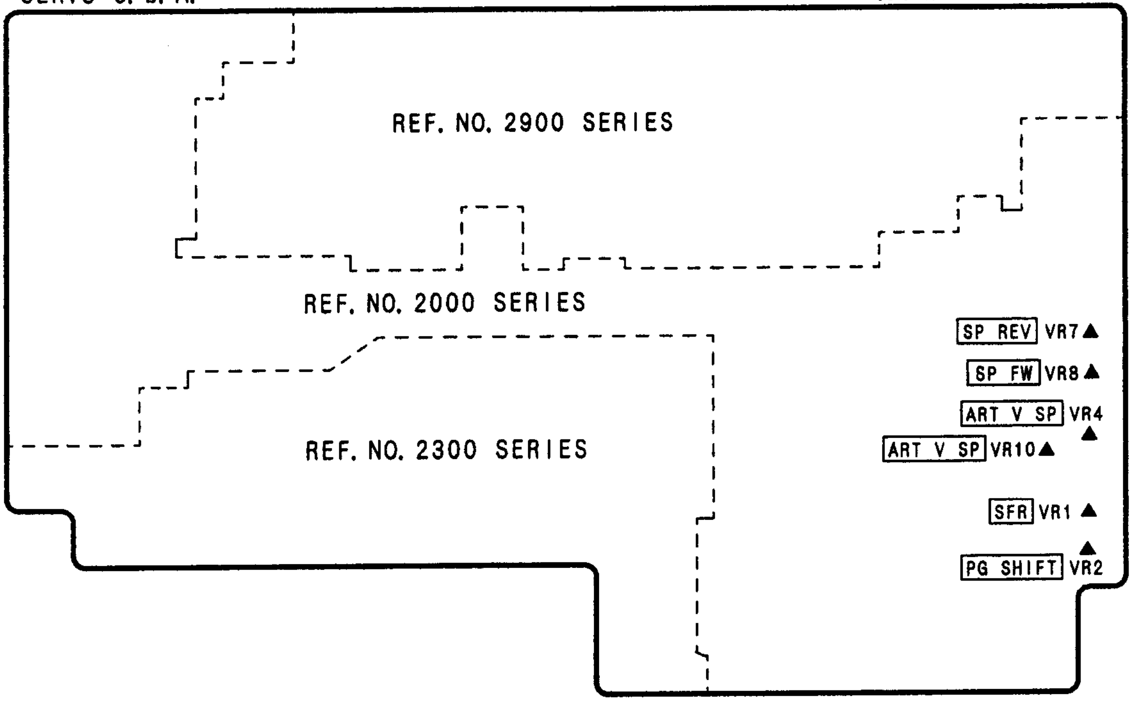
Figure E10

CIRCUIT BOARD LAYOUT

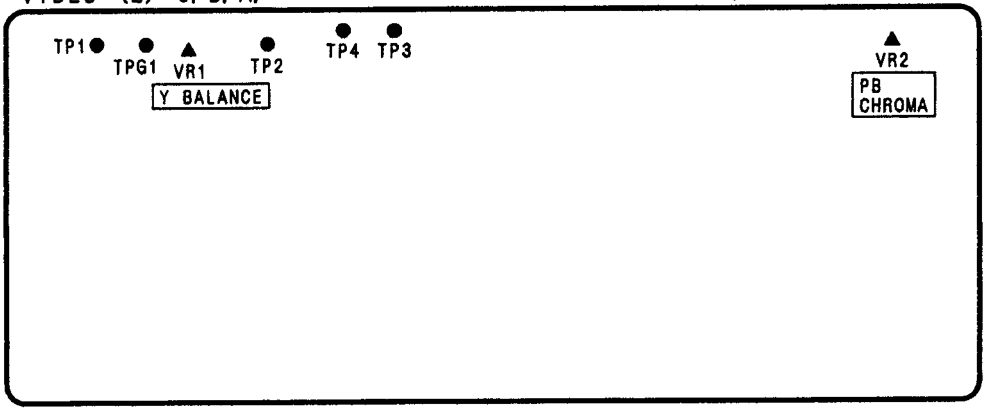

SYSTEM CONTROL C.B.A.
REEL SERVO SECTION : REF. NO. 2500 SERIES
SYSTEM CONTROL SECTION : REF. NO. 6000 SERIES
SUB SYSTEM CONTROL SECTION : REF. NO. 6200 SERIES
POWER SUPPLY (2) C.B.A.
REF. NO. 1000 SERIES
POWER SUPPLY (1) C.B.A.
REF. NO. 1000 SERIES
REAR JACK C.B.A.
REF. NO. 4900 SERIES
HEAD AMP C.B.A.
REF. NO. 500 SERIES
MIC AMP SUB C.B.A.
REF. NO. 4950 SERIES
AUDIO C.B.A.
REF. NO. 4000 SERIES
VIDEO (2) C.B.A.
REF. NO. 8000 SERIES
VIDEO (3) C.B.A.
REF. NO. 3000 SERIES
FRONT (2) C.B.A.
REF. NO. 6700 SERIES
FRONT (1) C.B.A.
REF. NO. 6600 SERIES
BACK UP SUB C.B.A.
REF. NO. 2990 SERIES
REEL DRIVE C.B.A.
REF. NO. 2700 SERIES
MOTHER C.B.A.
REF. NO. 900 SERIES
SERVO C.B.A.
SERVO SECTION : REF. NO. 2000 SERIES
MOTOR DRIVE SECTION : REF. NO. 2300SERIES
DC-DC SECTION : REF. NO. 2900 SERIES

LOCATION OF TEST POINTS & CONTROLS

SERVO C. B. A. (COMPONENT SIDE)

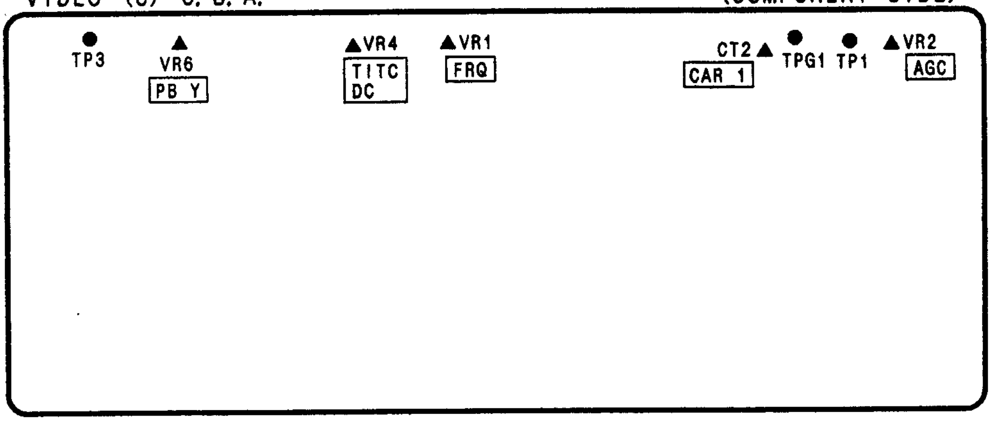

REF. NO. 2900 SERIES
REF. NO. 2000 SERIES
REF. NO. 2300 SERIES
SP REV VR7
SP FW VR8
ART V SP VR4
ART V SP VR10
SFR VR1
PG SHIFT VR2

VIDEO (2) C. B. A. (COMPONENT SIDE)


TP1
TPG1
VR1
Y BALANCE
TP2
TP4
TP3
VR2
PB CHROMA

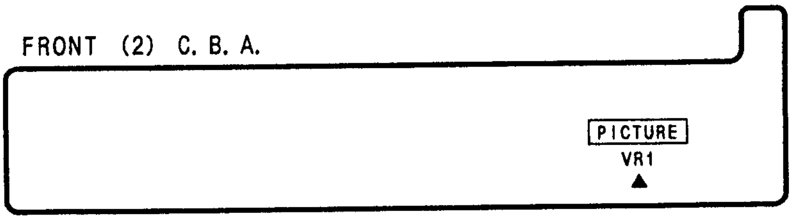
REF. NO. 8000 SERIES

VIDEO (3) C. B. A. (COMPONENT SIDE)


TP3
VR6
PB Y
VR4
TITC DC
VR1
FRQ
CT2
CAR 1
TPG1
TP1
VR2
AGC

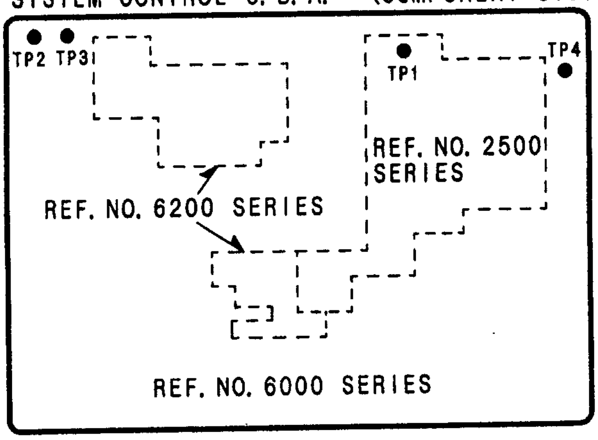
REF. NO. 3000 SERIES

FRONT (2) C. B. A.

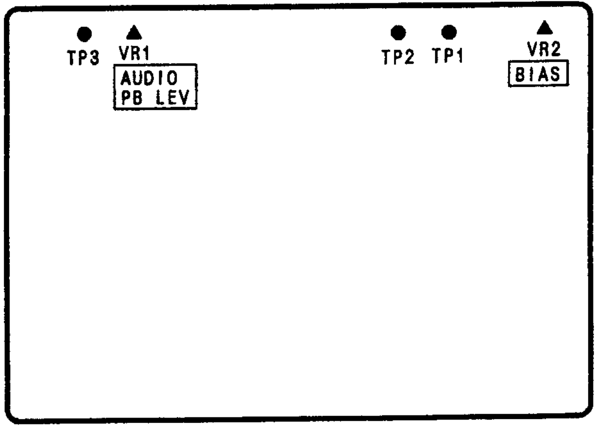

PICTURE
VR1

REF. NO. 6700 SERIES

SYSTEM CONTROL C. B. A. (COMPONENT SIDE)

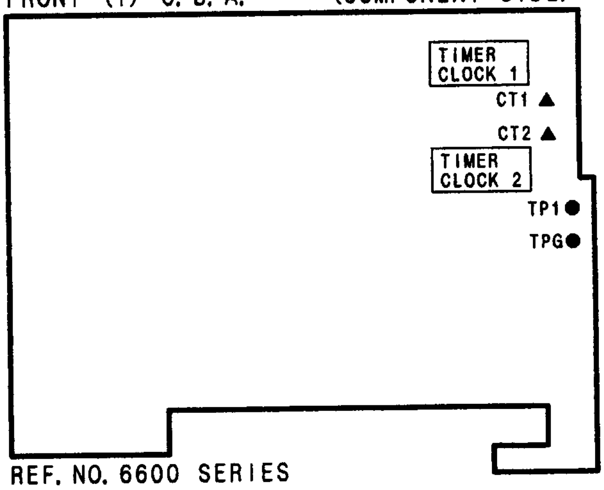

TP2
TP3
TP1
TP4
REF. NO. 2500 SERIES
REF. NO. 6200 SERIES
REF. NO. 6000 SERIES

AUDIO C. B. A. (COMPONENT SIDE)


TP3
VR1
AUDIO PB LEV
TP2
TP1
VR2
BIAS

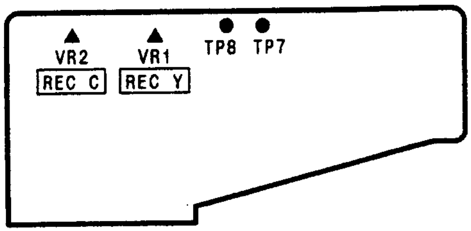
REF. NO. 4000 SERIES

FRONT (1) C. B. A. (COMPONENT SIDE)


TIMER CLOCK 1
CT1
CT2
TIMER CLOCK 2
TP1
TPG

REF. NO. 6600 SERIES

HEAD AMP C. B. A. (COMPONENT SIDE)


VR2
REC C
VR1
REC Y
TP8
TP7

REF. NO. 500 SERIES

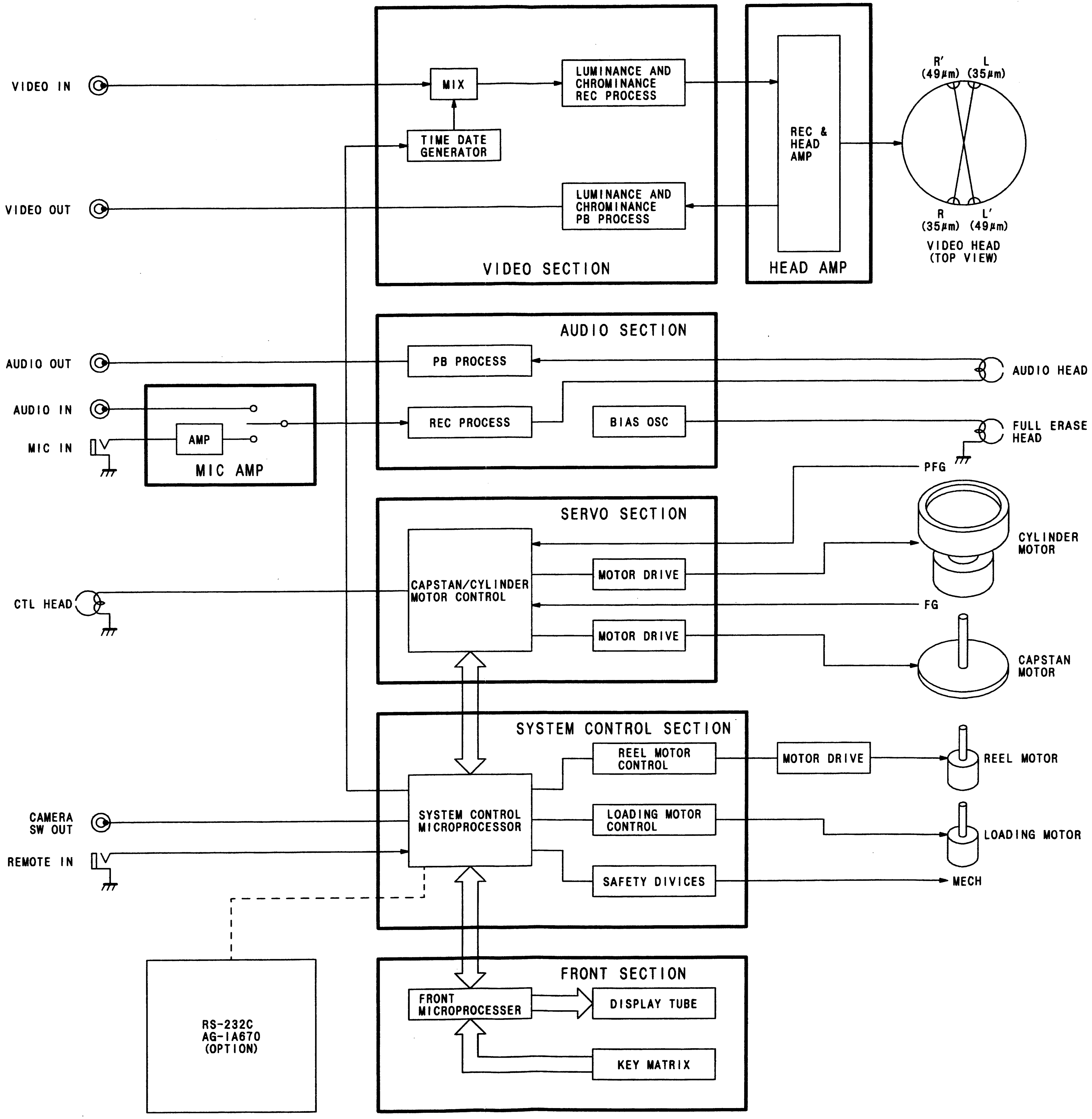
Section 6

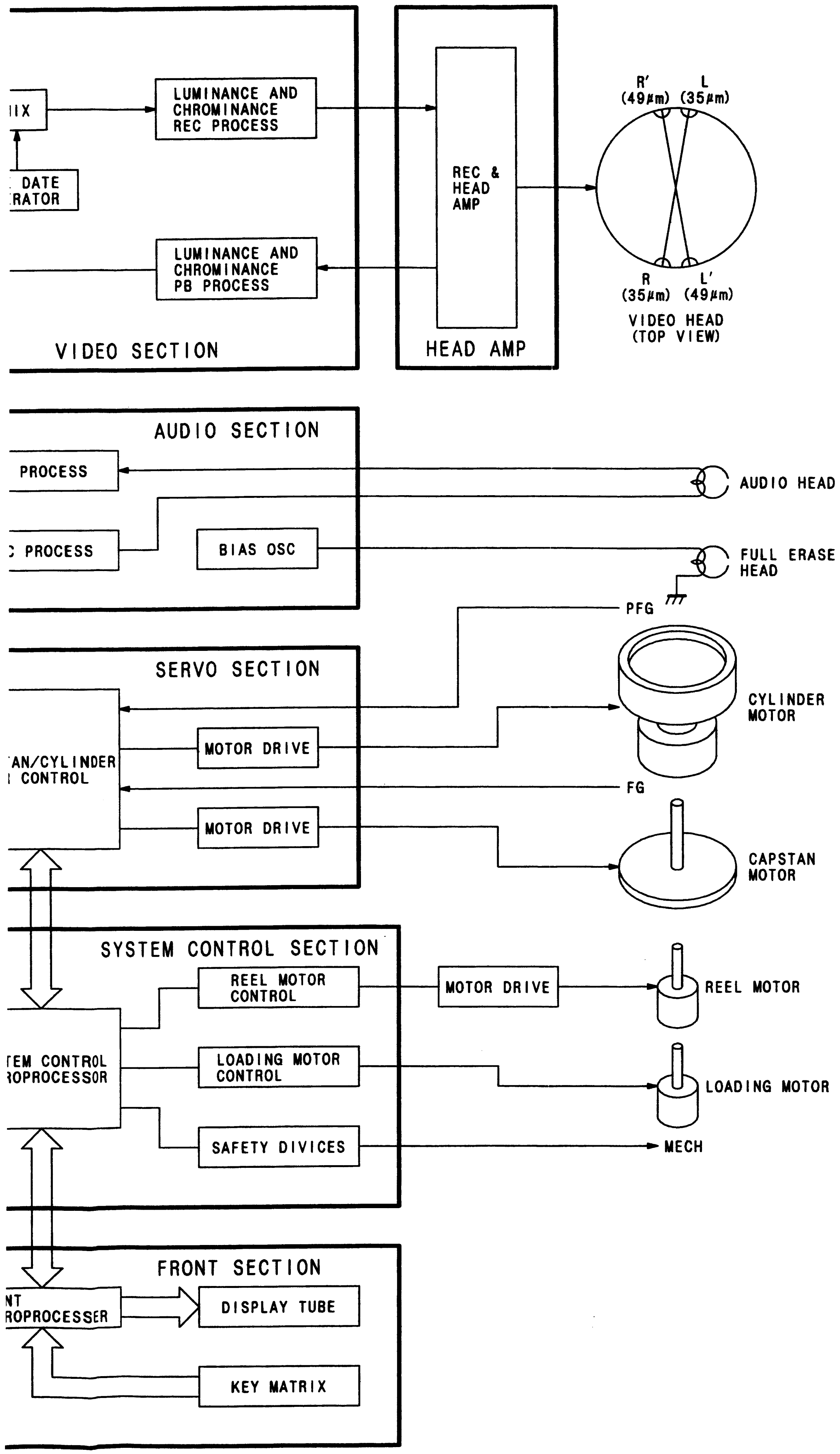
BLOCK DIAGRAMS

CONTENTS

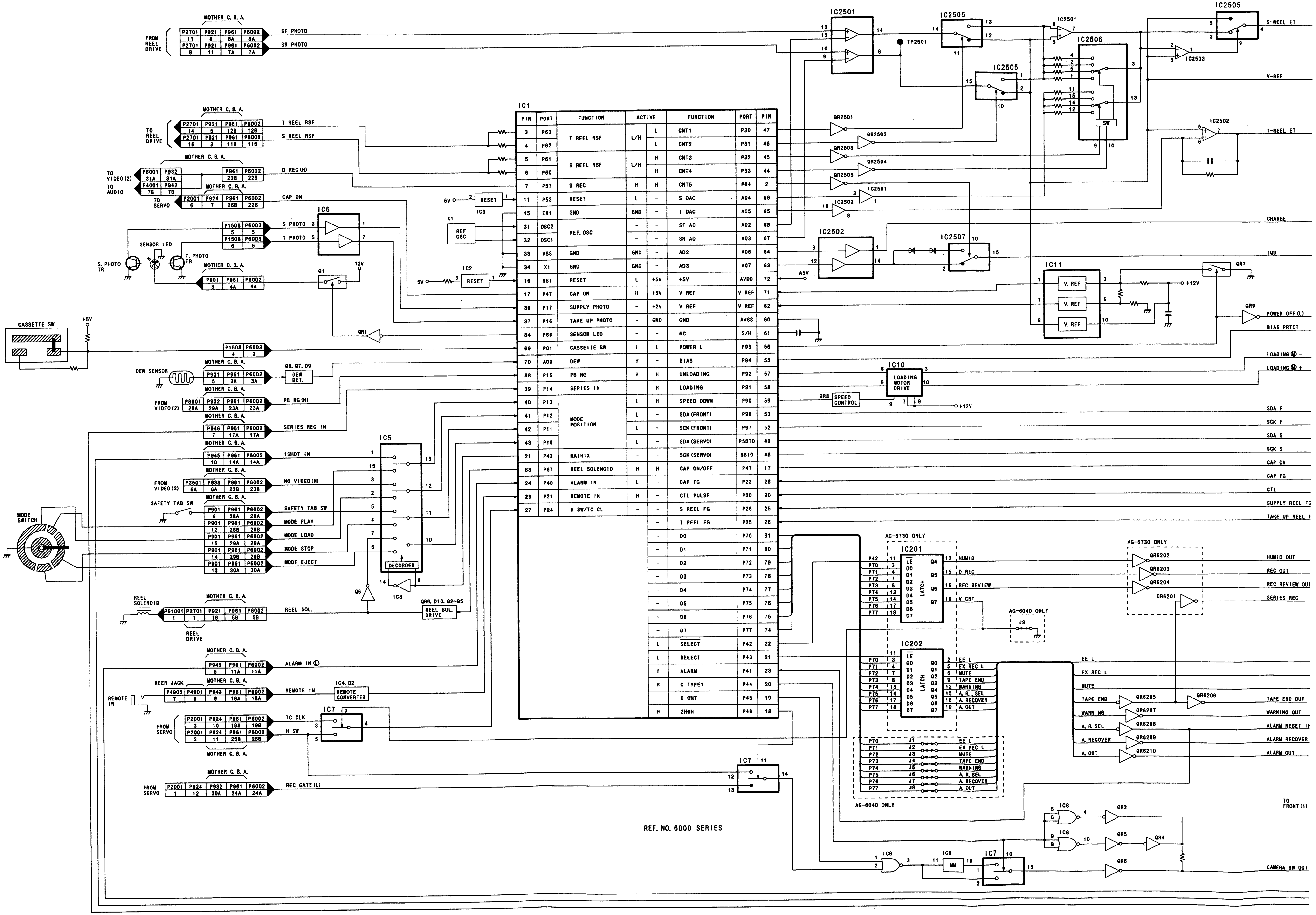
OVERALL BLOCK DIAGRAM FOR BLK-3
SYSTEM CONTROL BLOCK DIAGRAM BLK-4
SERVO BLOCK DIAGRAM BLK-5
VIDEO (2) BLOCK DIAGRAM BLK-6
VIDEO (3) BLOCK DIAGRAM BLK-7
REEL DRIVE BLOCK DIAGRAM BLK-8
FRONT (1) AND FRONT (2) BLOCK DIAGRAM BLK-9

OVERALL BLOCK DIAGRAM


VIDEO IN
VIDEO OUT
MIX
TIME DATE GENERATOR
LUMINANCE AND CHROMINANCE REC PROCESS
LUMINANCE AND CHROMINANCE PB PROCESS
VIDEO SECTION
REC & HEAD AMP
HEAD AMP
R' (49µm)
L (35µm)
R (35µm)
L' (49µm)
VIDEO HEAD (TOP VIEW)
AUDIO SECTION
AUDIO OUT
AUDIO IN
MIC IN
AMP
MIC AMP
PB PROCESS
REC PROCESS
BIAS OSC
AUDIO HEAD
FULL ERASE HEAD
PFG
SERVO SECTION
CAPSTAN/CYLINDER MOTOR CONTROL
MOTOR DRIVE
MOTOR DRIVE
CYLINDER MOTOR
FG
CAPSTAN MOTOR
CTL HEAD
SYSTEM CONTROL SECTION
REEL MOTOR CONTROL
MOTOR DRIVE
REEL MOTOR
CAMERA SW OUT
REMOTE IN
SYSTEM CONTROL MICROPROCESSOR
LOADING MOTOR CONTROL
LOADING MOTOR
SAFETY DIVICES
MECH
RS-232C AG-IA670 (OPTION)
FRONT SECTION
FRONT MICROPROCESSER
DISPLAY TUBE
KEY MATRIX

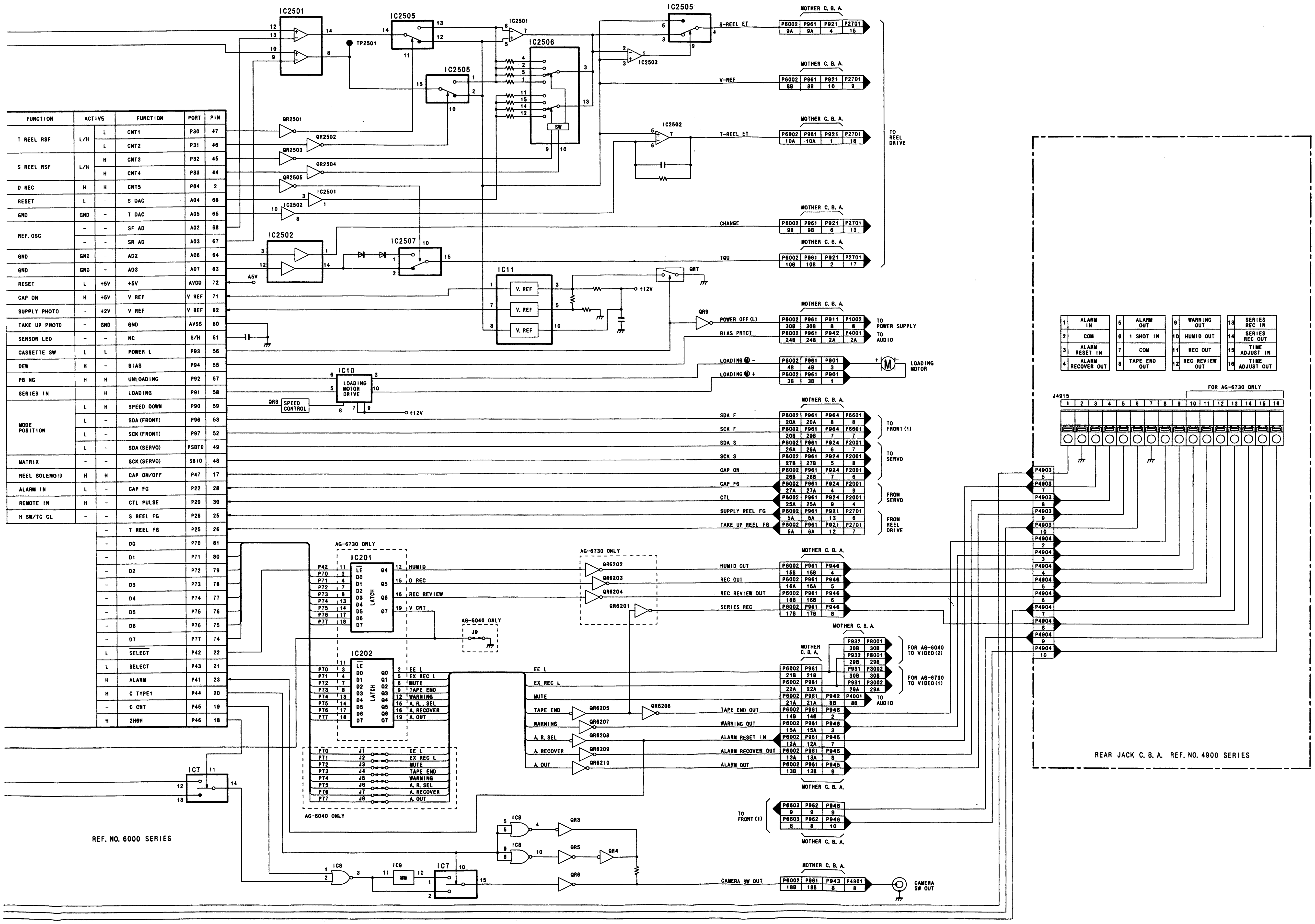

IIX
LUMINANCE AND CHROMINANCE REC PROCESS
DATE
RATOR
LUMINANCE AND CHROMINANCE PB PROCESS
VIDEO SECTION
REC & HEAD AMP
HEAD AMP
R' (49µm)
L (35µm)
R (35µm)
L' (49µm)
VIDEO HEAD (TOP VIEW)
AUDIO SECTION
PROCESS
PROCESS
BIAS OSC
AUDIO HEAD
FULL ERASE HEAD
PFG
SERVO SECTION
AN/CYLINDER
CONTROL
MOTOR DRIVE
MOTOR DRIVE
CYLINDER MOTOR
FG
CAPSTAN MOTOR
SYSTEM CONTROL SECTION
REEL MOTOR CONTROL
LOADING MOTOR CONTROL
SAFETY DIVICES
TEM CONTROL
ROPROCESSOR
MOTOR DRIVE
REEL MOTOR
LOADING MOTOR
MECH
FRONT SECTION
NT
ROPROCESSER
DISPLAY TUBE
KEY MATRIX

SYSTEM CONTROL BLOCK DIAGRAM


MOTHER C. B. A.
FROM REEL DRIVE
P2701 P921 P961 P6002 11 8 8A 8A SF PHOTO
P2701 P921 P961 P6002 8 11 7A 7A SR PHOTO
TO REEL DRIVE
P2701 P921 P961 P6002 14 5 12B 12B T REEL RSF
P2701 P921 P961 P6002 16 3 11B 11B S REEL RSF
TO VIDEO (2)
P8001 P932 31A 31A
TO AUDIO
P4001 P942 7B 7B
P961 P6002 22B 22B D REC (H)
TO SERVO
P2001 P924 P961 P6002 6 7 26B 22B CAP ON
IC6
P1508 P6003 5 5 S PHOTO
P1508 P6003 6 6 T PHOTO
SENSOR LED
S. PHOTO TR
T. PHOTO TR
P901 P961 P6002 8 4A 4A
Q1
12V
QR1
5V
RESET
IC3
X1
REF OSC
IC2
CASSETTE SW
+5V
P1508 P6003 4 2
DEW SENSOR
P901 P961 P6002 5 3A 3A
Q6, Q7, D9
DEW DET.
FROM VIDEO (2)
P8001 P932 P961 P6002 29A 29A 23A 23A PB NG (H)
P946 P961 P6002 7 17A 17A SERIES REC IN
P945 P961 P6002 10 14A 14A 1SHOT IN
FROM VIDEO (3)
P3501 P933 P961 P6002 6A 6A 23B 23B NO VIDEO (H)
SAFETY TAB SW
P901 P961 P6002 9 28A 28A SAFETY TAB SW
MODE SWITCH
P901 P961 P6002 12 28B 28B MODE PLAY
P901 P961 P6002 15 29A 29A MODE LOAD
P901 P961 P6002 14 29B 29B MODE STOP
P901 P961 P6002 13 30A 30A MODE EJECT
IC5
DECORDER
IC8
Q6
REEL SOLENOID
P61001 P2701 P921 P961 P6002 1 1 18 5B 5B REEL SOL.
REEL DRIVE
QR6, D10, Q2~Q5
REEL SOL. DRIVE
P945 P961 P6002 5 11A 11A ALARM IN Ⓛ
REER JACK
REMOTE IN
P4905 P4901 P943 P961 P6002 7 9 9 18A 18A REMOTE IN
IC4, D2
REMOTE CONVERTER
FROM SERVO
P2001 P924 P961 P6002 3 10 19B 19B TC CLK
P2001 P924 P961 P6002 2 11 25B 25B H SW
IC7
P2001 P924 P932 P961 P6002 1 12 30A 24A 24A REC GATE (L)
IC2501
IC2505
TP2501
IC2506
SW
IC2503
IC2502
S-REEL ET
V-REF
T-REEL ET
QR2501
QR2502
QR2503
QR2504
QR2505
CHANGE
IC2507
TQU
A5V
IC11
V. REF
+12V
QR7
QR9
POWER OFF (L)
BIAS PRTCT
LOADING Ⓜ −
LOADING Ⓜ +
IC10
LOADING MOTOR DRIVE
QR8
SPEED CONTROL
SDA F
SCK F
SDA S
SCK S
CAP ON
CAP FG
CTL
SUPPLY REEL FG
TAKE UP REEL F
AG-6730 ONLY
IC201
LATCH
LE D0 D1 D2 D3 D4 D5 D6 D7
Q4 Q5 Q6 Q7
P42 P70 P71 P72 P73 P74 P75 P76 P77
HUMID
D REC
REC REVIEW
V CNT
AG-6040 ONLY
J9
IC202
Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7
EE L
EX REC L
MUTE
TAPE END
WARNING
A. R. SEL
A. RECOVER
A. OUT
J1 J2 J3 J4 J5 J6 J7 J8
QR6202
QR6203
QR6204
QR6201
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC
QR6205
QR6206
QR6207
QR6208
QR6209
QR6210
TAPE END OUT
WARNING OUT
ALARM RESET IN
ALARM RECOVER
ALARM OUT
TO FRONT (1)
IC8
QR3
QR5
QR4
QR6
IC9
MM
CAMERA SW OUT
REF. NO. 6000 SERIES

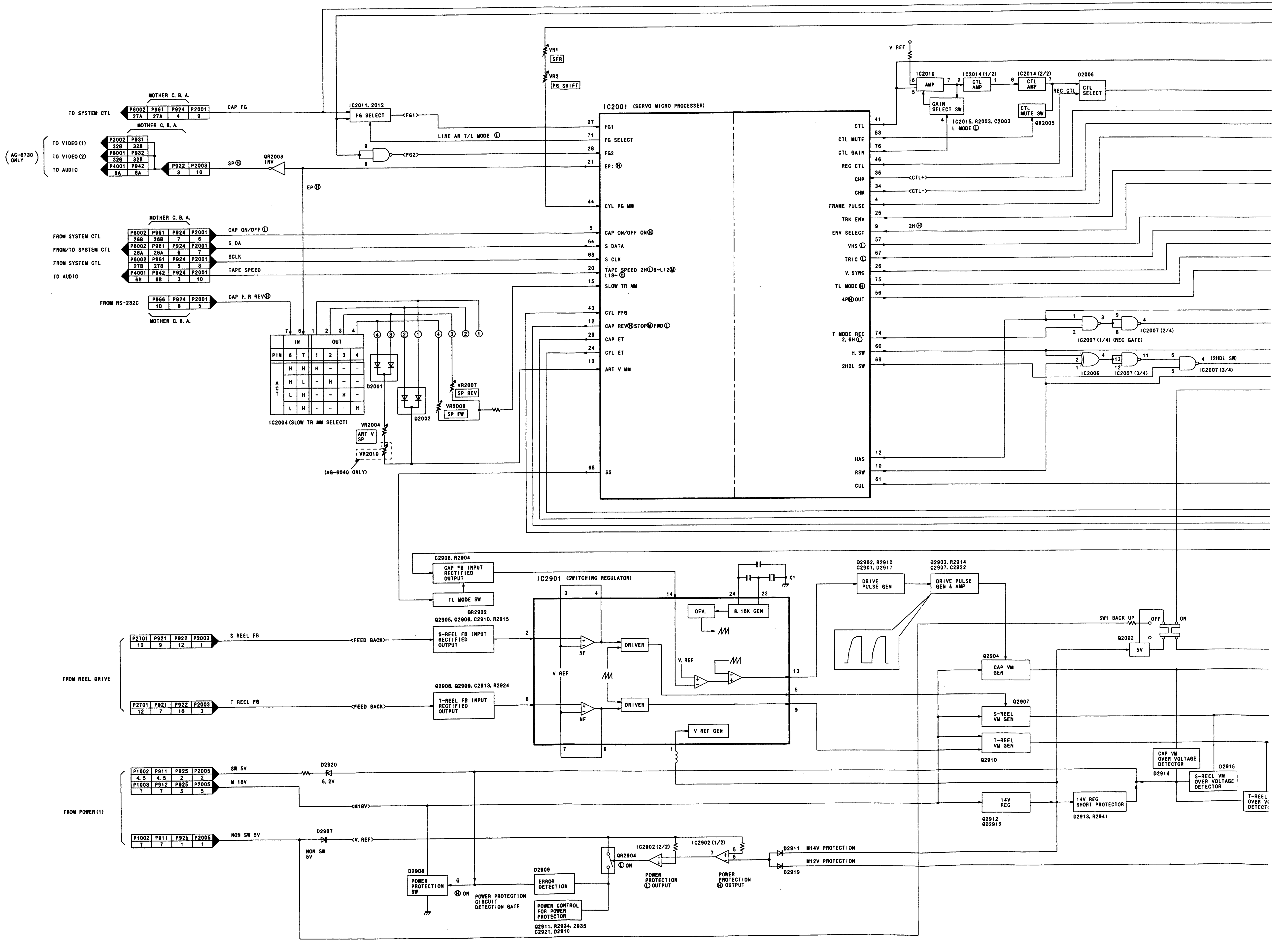
IC1

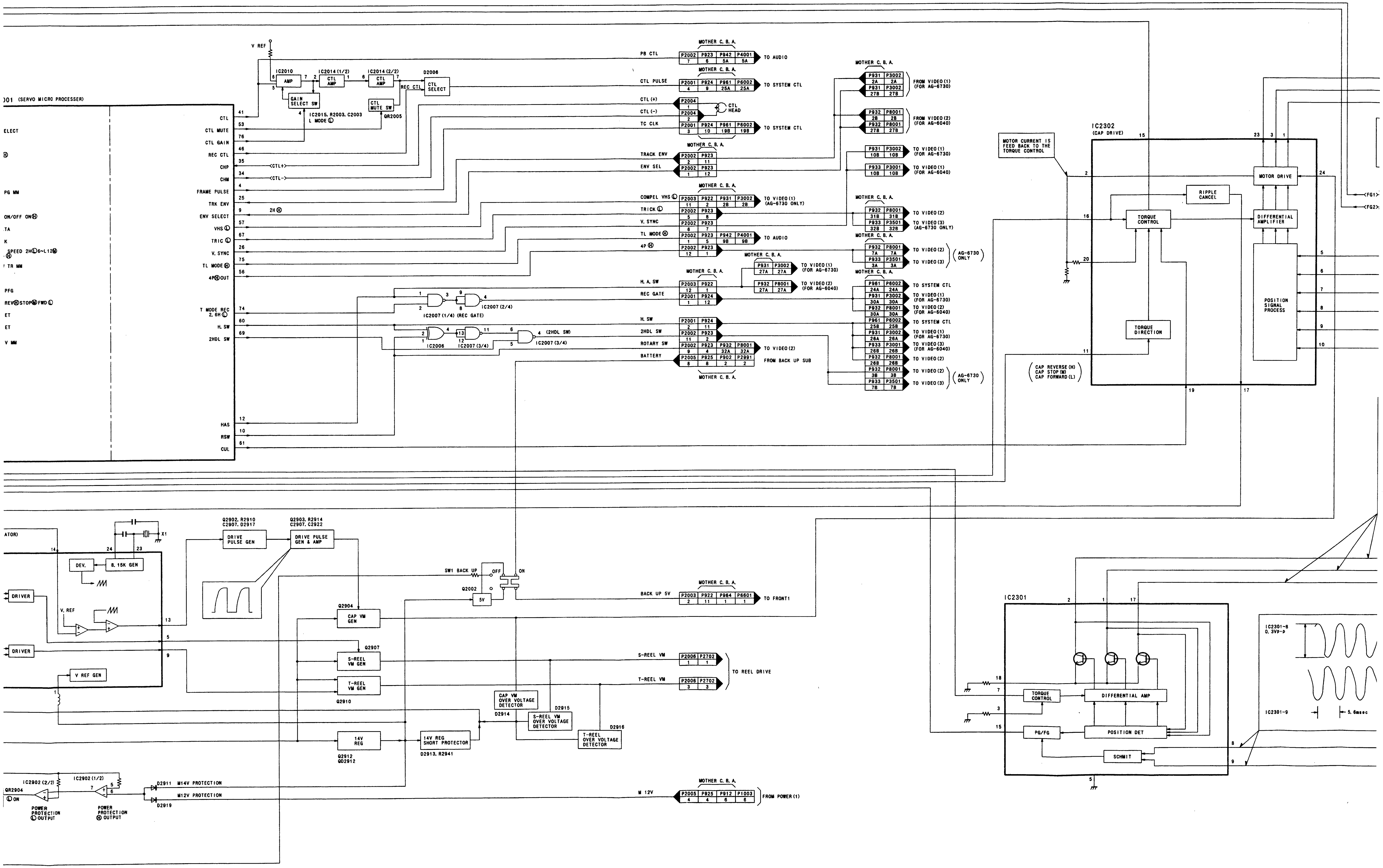
PIN	PORT	FUNCTION	ACTIVE		FUNCTION	PORT	PIN
3	P63	T REEL RSF	L/H	L	CNT1	P30	47
4	P62			L	CNT2	P31	46
5	P61	S REEL RSF	L/H	H	CNT3	P32	45
6	P60			H	CNT4	P33	44
7	P57	D REC	H	H	CNT5	P64	2
11	P53	RESET	L	–	S DAC	A04	66
15	EX1	GND	GND	–	T DAC	A05	65
31	OSC2	REF. OSC	–	–	SF AD	A02	68
32	OSC1		–	–	SR AD	A03	67
33	VSS	GND	GND	–	AD2	A06	64
34	X1	GND	GND	–	AD3	A07	63
16	RST	RESET	L	+5V	+5V	AVDD	72
17	P47	CAP ON	H	+5V	V REF	V REF	71
36	P17	SUPPLY PHOTO	–	+2V	V REF	V REF	62
37	P16	TAKE UP PHOTO	–	GND	GND	AVSS	60
84	P66	SENSOR LED	–	–	NC	S/H	61
69	P01	CASSETTE SW	L	L	POWER L	P93	56
70	A00	DEW	H	–	BIAS	P94	55
38	P15	PB NG	H	H	UNLOADING	P92	57
39	P14	SERIES IN		H	LOADING	P91	58
40	P13	MODE POSITION	L	H	SPEED DOWN	P90	59
41	P12		L	–	SDA (FRONT)	P96	53
42	P11		L	–	SCK (FRONT)	P97	52
43	P10		L	–	SDA (SERVO)	PSBTO	49
21	P43	MATRIX	–	–	SCK (SERVO)	SBI0	48
83	P67	REEL SOLENOID	H	H	CAP ON/OFF	P47	17
24	P40	ALARM IN	L	–	CAP FG	P22	28
29	P21	REMOTE IN	H	–	CTL PULSE	P20	30
27	P24	H SW/TC CL	–	–	S REEL FG	P26	25
				–	T REEL FG	P25	26
				–	D0	P70	81
				–	D1	P71	80
				–	D2	P72	79
				–	D3	P73	78
				–	D4	P74	77
				–	D5	P75	76
				–	D6	P76	75
				–	D7	P77	74
				L	$\overline{\text{SELECT}}$	P42	22
				L	SELECT	P43	21
				H	ALARM	P41	23
				H	C TYPE1	P44	20
				–	C CNT	P45	19
				H	2H6H	P46	18


IC2501
IC2505
IC2506
IC2503
IC2502
IC2507
IC11
IC10
LOADING MOTOR DRIVE
QR8
SPEED CONTROL
QR7
QR9
TP2501
+12V
A5V
SW
V. REF
QR2501
QR2502
QR2503
QR2504
QR2505
S-REEL ET
V-REF
T-REEL ET
CHANGE
TQU
POWER OFF (L)
BIAS PRTCT
LOADING ⊕ -
LOADING ⊕ +
MOTHER C. B. A.
P6002
P961
P921
P2701
TO REEL DRIVE
TO POWER SUPPLY
TO AUDIO
LOADING MOTOR
SDA F
SCK F
SDA S
SCK S
CAP ON
CAP FG
CTL
SUPPLY REEL FG
TAKE UP REEL FG
TO FRONT (1)
TO SERVO
FROM SERVO
FROM REEL DRIVE
AG-6730 ONLY
IC201
IC202
LATCH
HUMID
D REC
REC REVIEW
V CNT
AG-6040 ONLY
J9
QR6201
QR6202
QR6203
QR6204
HUMID OUT
REC OUT
REC REVIEW OUT
SERIES REC
EE L
EX REC L
MUTE
TAPE END
WARNING
A. R. SEL
A. RECOVER
A. OUT
QR6205
QR6206
QR6207
QR6208
QR6209
QR6210
TAPE END OUT
WARNING OUT
ALARM RESET IN
ALARM RECOVER OUT
ALARM OUT
FOR AG-6040 TO VIDEO (2)
FOR AG-6730 TO VIDEO (1)
TO AUDIO
J1
J2
J3
J4
J5
J6
J7
J8
IC7
IC8
IC9
MM
QR3
QR4
QR5
QR6
CAMERA SW OUT
TO FRONT (1)
P6603
P962
P946
REF. NO. 6000 SERIES
J4915
FOR AG-6730 ONLY
P4903
P4904
1 ALARM IN
2 COM
3 ALARM RESET IN
4 ALARM RECOVER OUT
5 ALARM OUT
6 1 SHOT IN
7 COM
8 TAPE END OUT
9 WARNING OUT
10 HUMID OUT
11 REC OUT
12 REC REVIEW OUT
13 SERIES REC IN
14 SERIES REC OUT
15 TIME ADJUST IN
16 TIME ADJUST OUT
REAR JACK C. B. A. REF. NO. 4900 SERIES

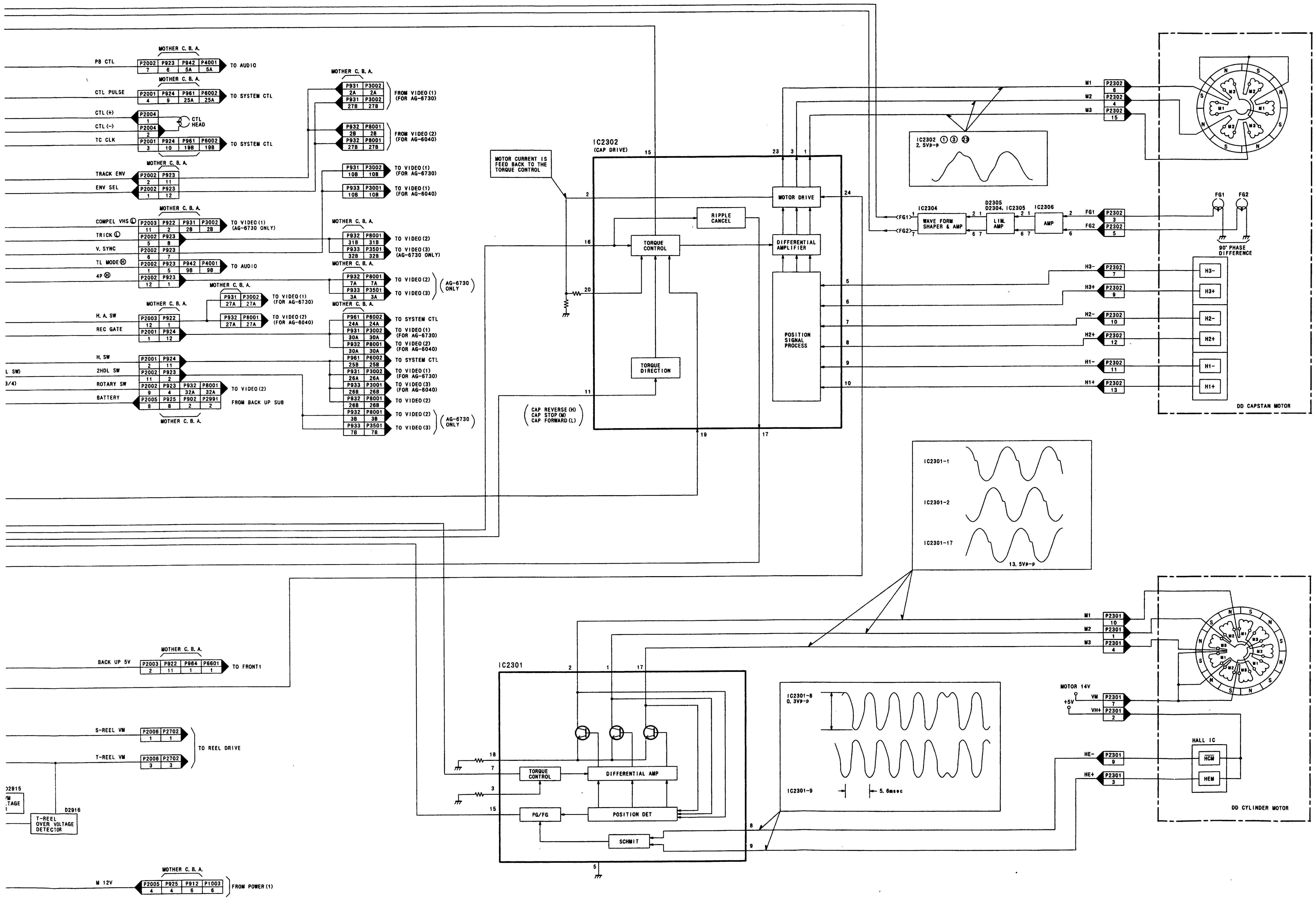
FUNCTION	ACTIVE		FUNCTION	PORT	PIN
T REEL RSF	L/H	L	CNT1	P30	47
		L	CNT2	P31	46
S REEL RSF	L/H	H	CNT3	P32	45
		H	CNT4	P33	44
D REC	H	H	CNT5	P64	2
RESET	L	-	S DAC	A04	66
GND	GND	-	T DAC	A05	65
REF. OSC	-	-	SF AD	A02	68
	-	-	SR AD	A03	67
GND	GND	-	AD2	A06	64
GND	GND	-	AD3	A07	63
RESET	L	+5V	+5V	AVDD	72
CAP ON	H	+5V	V REF	V REF	71
SUPPLY PHOTO	-	+2V	V REF	V REF	62
TAKE UP PHOTO	-	GND	GND	AVSS	60
SENSOR LED	-	-	NC	S/H	61
CASSETTE SW	L	L	POWER L	P93	56
DEW	H	-	BIAS	P94	55
PB NG	H	H	UNLOADING	P92	57
SERIES IN		H	LOADING	P91	58
MODE POSITION	L	H	SPEED DOWN	P90	59
	L	-	SDA (FRONT)	P96	53
	L	-	SCK (FRONT)	P97	52
	L	-	SDA (SERVO)	PSBTO	49
MATRIX	-	-	SCK (SERVO)	SBI0	48
REEL SOLENOID	H	H	CAP ON/OFF	P47	17
ALARM IN	L	-	CAP FG	P22	28
REMOTE IN	H	-	CTL PULSE	P20	30
H SW/TC CL	-	-	S REEL FG	P26	25
		-	T REEL FG	P25	26
		-	D0	P70	81
		-	D1	P71	80
		-	D2	P72	79
		-	D3	P73	78
		-	D4	P74	77
		-	D5	P75	76
		-	D6	P76	75
		-	D7	P77	74
		L	$\overline{\text{SELECT}}$	P42	22
		L	SELECT	P43	21
		H	ALARM	P41	23
		H	C TYPE1	P44	20
		-	C CNT	P45	19
		H	2H6H	P46	18

SERVO BLOCK DIAGRAM

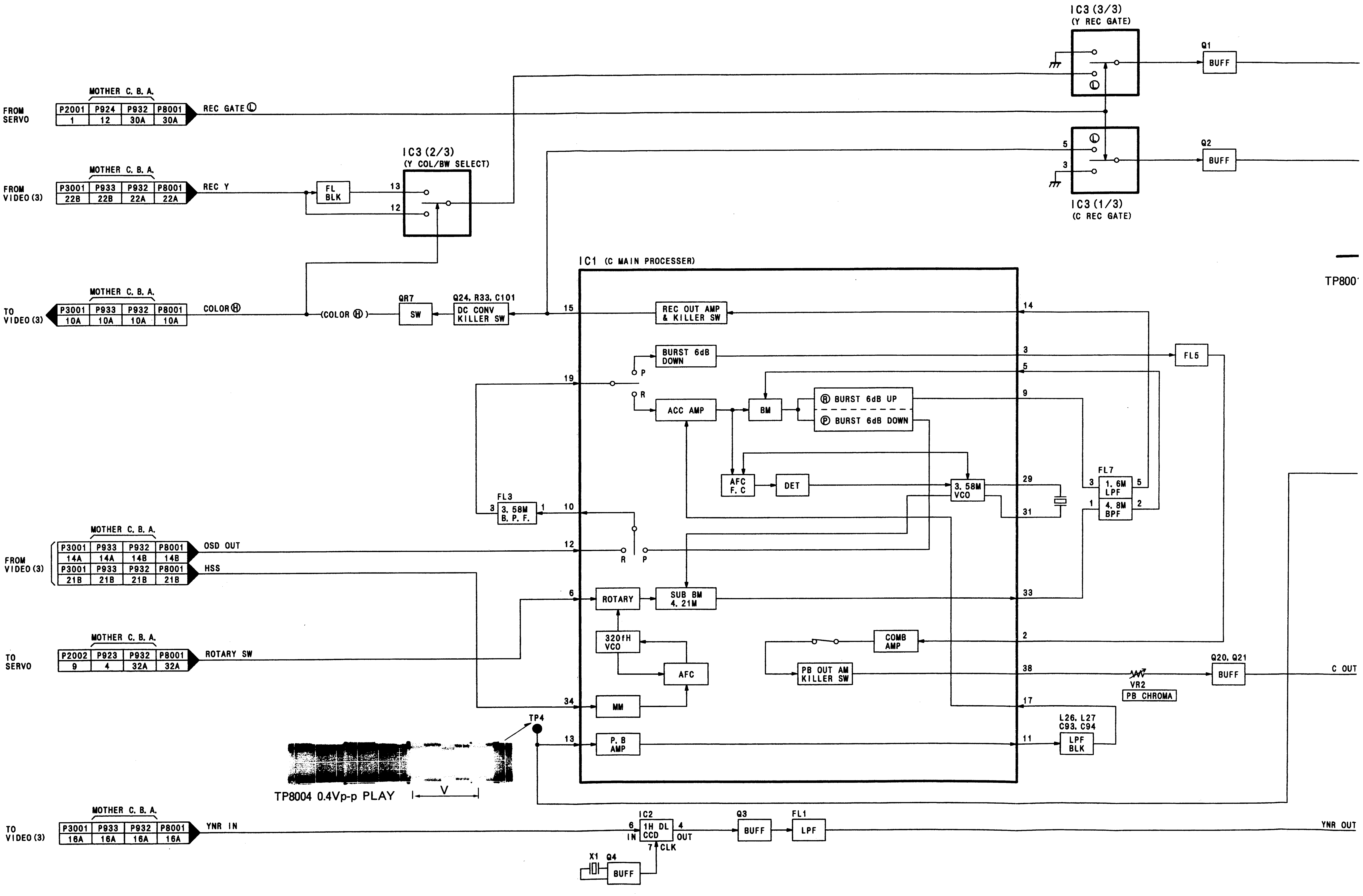

TO SYSTEM CTL
MOTHER C. B. A.
P6002 P961 P924 P2001
27A 27A 4 9
CAP FG
TO VIDEO (1)
TO VIDEO (2)
TO AUDIO
(AG-6730 ONLY)
P3002 P931
32B 32B
P8001 P932
32B 32B
P4001 P942
6A 6A
P922 P2003
3 10
SP Ⓗ
QR2003 INV
EP Ⓗ
IC2011, 2012
FG SELECT
<FG1>
<FG2>
LINE AR T/L MODE Ⓛ
VR1
SFR
VR2
PG SHIFT
FROM SYSTEM CTL
FROM/TO SYSTEM CTL
FROM SYSTEM CTL
TO AUDIO
P6002 P961 P924 P2001
26B 26B 7 6
P6002 P961 P924 P2001
26A 26A 6 7
P6002 P961 P924 P2001
27B 27B 5 8
P4001 P942 P924 P2001
6B 6B 3 10
CAP ON/OFF Ⓛ
S. DA
SCLK
TAPE SPEED
FROM RS-232C
P966 P924 P2001
10 8 5
CAP F. R REVⒽ
IN
OUT
PIN 6 7 1 2 3 4
ACT
H H H - - -
H L - H - -
L H - - H -
L H - - - H
IC2004 (SLOW TR MM SELECT)
D2001
D2002
VR2007
SP REV
VR2008
SP FW
VR2004
ART V SP
VR2010
(AG-6040 ONLY)
IC2001 (SERVO MICRO PROCESSER)
27 FG1
71 FG SELECT
28 FG2
21 EP: Ⓗ
44 CYL PG MM
5 CAP ON/OFF ONⒽ
64 S DATA
63 S CLK
20 TAPE SPEED 2HⓁ6~L12Ⓜ L18~Ⓗ
15 SLOW TR MM
43 CYL PFG
12 CAP REVⒽSTOPⓂFWDⓁ
23 CAP ET
24 CYL ET
13 ART V MM
68 SS
41 CTL
53 CTL MUTE
76 CTL GAIN
46 REC CTL
35 CHP
34 CHM
4 FRAME PULSE
25 TRK ENV
9 ENV SELECT
57 VHS Ⓛ
67 TRIC Ⓛ
26 V. SYNC
75 TL MODE Ⓗ
56 4PⒽOUT
74 T MODE REC 2. 6H Ⓛ
60 H. SW
69 2HDL SW
12 HAS
10 RSW
61 CUL
<CTL+>
<CTL->
2H Ⓗ
V REF
IC2010
AMP
IC2014 (1/2)
CTL AMP
IC2014 (2/2)
CTL AMP
GAIN SELECT SW
IC2015, R2003, C2003
L MODE Ⓛ
CTL MUTE SW
QR2005
REC CTL
D2006
CTL SELECT
IC2007 (1/4) (REC GATE)
IC2007 (2/4)
IC2006
IC2007 (3/4)
(2HDL SW)
IC2007 (3/4)
C2906, R2904
CAP FB INPUT RECTIFIED OUTPUT
TL MODE SW
QR2902
Q2905, Q2906, C2910, R2915
S-REEL FB INPUT RECTIFIED OUTPUT
Q2908, Q2909, C2913, R2924
T-REEL FB INPUT RECTIFIED OUTPUT
FROM REEL DRIVE
P2701 P921 P922 P2003
10 9 12 1
S REEL FB
<FEED BACK>
P2701 P921 P922 P2003
12 7 10 3
T REEL FB
<FEED BACK>
IC2901 (SWITCHING REGULATOR)
NF
DRIVER
V REF
DEV.
8. 15K GEN
V. REF
V REF GEN
X1
Q2902, R2910
C2907, D2917
DRIVE PULSE GEN
Q2903, R2914
C2907, C2922
DRIVE PULSE GEN & AMP
SW1 BACK UP
OFF
ON
Q2002
5V
Q2904
CAP VM GEN
Q2907
S-REEL VM GEN
T-REEL VM GEN
Q2910
CAP VM OVER VOLTAGE DETECTOR
D2914
D2915
S-REEL VM OVER VOLTAGE DETECTOR
T-REEL OVER V DETECT
14V REG
Q2912
QD2912
14V REG SHORT PROTECTOR
D2913, R2941
FROM POWER (1)
P1002 P911 P925 P2005
4, 5 4, 5 2 2
P1003 P912 P925 P2005
7 7 5 5
SW 5V
M 18V
D2920
6. 2V
<M18V>
P1002 P911 P925 P2005
7 7 1 1
NON SW 5V
D2907
NON SW 5V
<V. REF>
D2908
POWER PROTECTION SW
G
Ⓗ ON
POWER PROTECTION CIRCUIT DETECTION GATE
D2909
ERROR DETECTION
POWER CONTROL FOR POWER PROTECTOR
Q2911, R2934, 2935
C2921, D2910
QR2904
Ⓛ ON
IC2902 (2/2)
IC2902 (1/2)
POWER PROTECTION Ⓛ OUTPUT
POWER PROTECTION Ⓗ OUTPUT
D2911 M14V PROTECTION
M12V PROTECTION
D2919


(SERVO MICRO PROCESSER)
CTL
CTL MUTE
CTL GAIN
REC CTL
CHP
CHM
FRAME PULSE
TRK ENV
ENV SELECT
VHS
TRIC
V. SYNC
TL MODE
4P OUT
T MODE REC 2. 6H
H. SW
2HDL SW
HAS
RSW
CUL
V REF
IC2010
AMP
GAIN SELECT SW
IC2014 (1/2)
CTL AMP
IC2014 (2/2)
CTL MUTE SW
D2006
CTL SELECT
REC CTL
IC2015, R2003, C2003
L MODE
QR2005
PB CTL
CTL PULSE
CTL (+)
CTL (-)
CTL HEAD
TC CLK
TRACK ENV
ENV SEL
COMPEL VHS
TRICK
V. SYNC
TL MODE
4P
H. A. SW
REC GATE
H. SW
2HDL SW
ROTARY SW
BATTERY
MOTHER C. B. A.
TO AUDIO
TO SYSTEM CTL
FROM VIDEO (1) (FOR AG-6730)
FROM VIDEO (2) (FOR AG-6040)
TO VIDEO (1) (FOR AG-6730)
TO VIDEO (1) (FOR AG-6040)
TO VIDEO (1) (AG-6730 ONLY)
TO VIDEO (2)
TO VIDEO (3) (AG-6730 ONLY)
TO VIDEO (3)
AG-6730 ONLY
TO VIDEO (2) (FOR AG-6040)
FROM BACK UP SUB
IC2007 (1/4) (REC GATE)
IC2007 (2/4)
IC2006
IC2007 (3/4)
(2HDL SW)
MOTOR CURRENT IS FEED BACK TO THE TORQUE CONTROL
IC2302 (CAP DRIVE)
TORQUE CONTROL
RIPPLE CANCEL
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
POSITION SIGNAL PROCESS
TORQUE DIRECTION
CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L)
<FG1>
<FG2>
DEV.
8. 15K GEN
X1
DRIVER
V. REF
V REF GEN
Q2902, R2910 C2907, D2917
DRIVE PULSE GEN
Q2903, R2914 C2907, C2922
DRIVE PULSE GEN & AMP
SW1 BACK UP
OFF
ON
Q2002
5V
BACK UP 5V
TO FRONT1
Q2904
CAP VM GEN
Q2907
S-REEL VM GEN
T-REEL VM GEN
Q2910
S-REEL VM
T-REEL VM
TO REEL DRIVE
CAP VM OVER VOLTAGE DETECTOR
D2914
D2915
S-REEL VM OVER VOLTAGE DETECTOR
D2916
T-REEL OVER VOLTAGE DETECTOR
14V REG
Q2912
QD2912
14V REG SHORT PROTECTOR
D2913, R2941
IC2902 (2/2)
IC2902 (1/2)
QR2904
POWER PROTECTION L OUTPUT
POWER PROTECTION H OUTPUT
D2911 M14V PROTECTION
M12V PROTECTION
D2919
M 12V
FROM POWER (1)
IC2301
TORQUE CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SCHMIT
IC2301-8 0. 3Vp-p
IC2301-9
5. 6msec

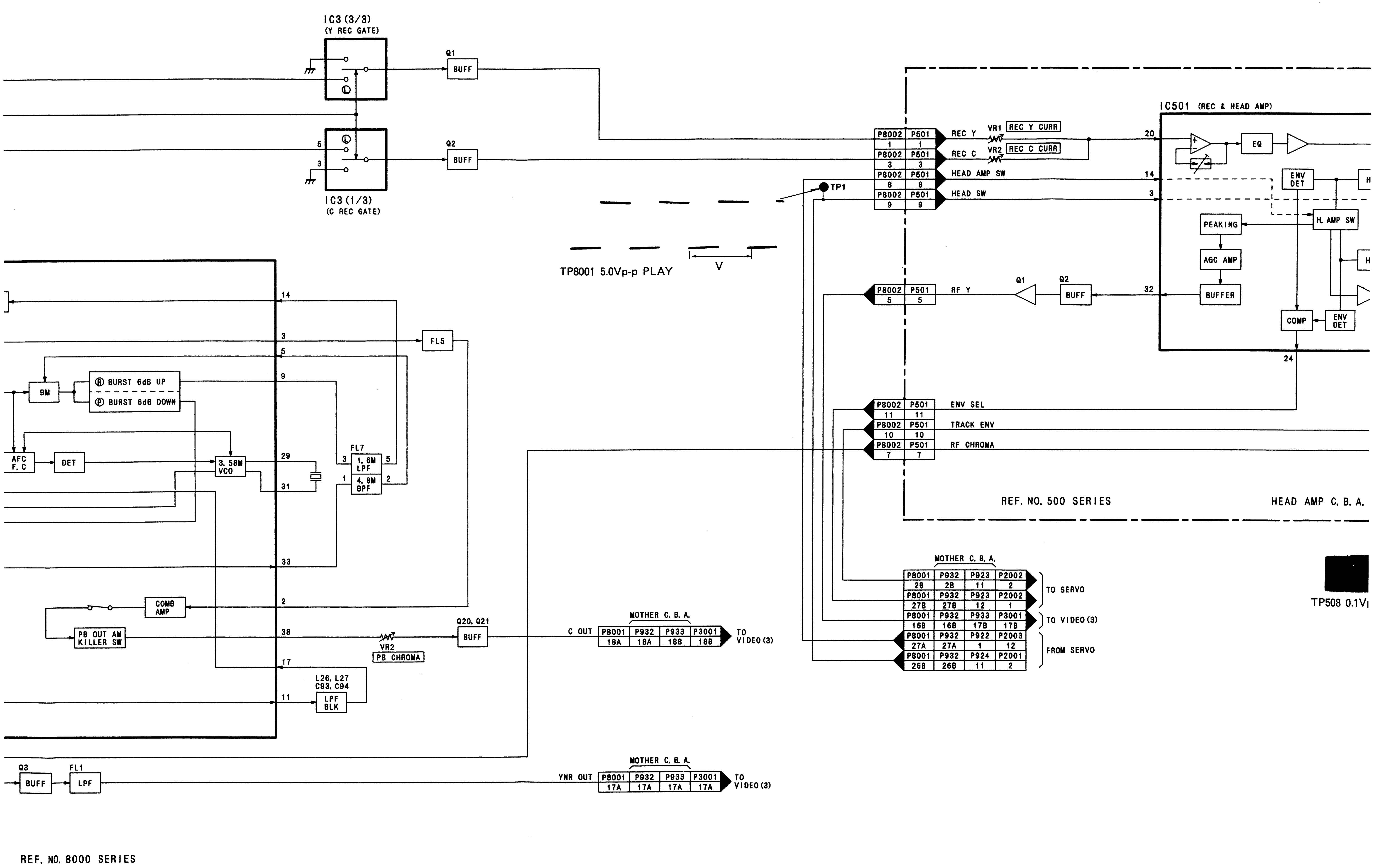
VIDE-V00995 / Druck 6


MOTHER C. B. A.
PB CTL
P2002 7 | P923 6 | P942 5A | P4001 5A
TO AUDIO
CTL PULSE
P2001 4 | P924 9 | P961 25A | P6002 25A
TO SYSTEM CTL
CTL (+)
CTL (-)
P2004 1
P2004 2
CTL HEAD
TC CLK
P2001 3 | P924 10 | P961 19B | P6002 19B
TO SYSTEM CTL
TRACK ENV
P2002 2 | P923 11
ENV SEL
P2002 1 | P923 12
P931 2A | P3002 2A
P931 27B | P3002 27B
FROM VIDEO (1) (FOR AG-6730)
P932 2B | P8001 2B
P932 27B | P8001 27B
FROM VIDEO (2) (FOR AG-6040)
P931 10B | P3002 10B
TO VIDEO (1) (FOR AG-6730)
P933 10B | P3001 10B
TO VIDEO (1) (FOR AG-6040)
COMPEL VHS Ⓛ
P2003 11 | P922 2 | P931 2B | P3002 2B
TO VIDEO (1) (AG-6730 ONLY)
TRICK Ⓛ
P2002 5 | P923 8
V. SYNC
P2002 6 | P923 7
TL MODE Ⓗ
P2002 1 | P923 5 | P942 9B | P4001 9B
TO AUDIO
4P Ⓗ
P2002 12 | P923 1
P932 31B | P8001 31B
TO VIDEO (2)
P933 32B | P3501 32B
TO VIDEO (3) (AG-6730 ONLY)
P932 7A | P8001 7A
TO VIDEO (2)
P933 3A | P3501 3A
TO VIDEO (3)
(AG-6730 ONLY)
P931 27A | P3002 27A
TO VIDEO (1) (FOR AG-6730)
P932 27A | P8001 27A
TO VIDEO (2) (FOR AG-6040)
H. A. SW
P2003 12 | P922 1
REC GATE
P2001 1 | P924 12
P961 24A | P6002 24A
TO SYSTEM CTL
P931 30A | P3002 30A
TO VIDEO (1) (FOR AG-6730)
P932 30A | P8001 30A
TO VIDEO (2) (FOR AG-6040)
P961 25B | P6002 25B
TO SYSTEM CTL
P931 26A | P3002 26A
TO VIDEO (1) (FOR AG-6730)
P933 26B | P3001 26B
TO VIDEO (3) (FOR AG-6040)
P932 26B | P8001 26B
TO VIDEO (2)
P932 3B | P8001 3B
TO VIDEO (2)
P933 7B | P3501 7B
TO VIDEO (3)
(AG-6730 ONLY)
L SW)
3/4)
H. SW
P2001 2 | P924 11
2HDL SW
P2002 11 | P923 2
ROTARY SW
P2002 9 | P923 4 | P932 32A | P8001 32A
TO VIDEO (2)
BATTERY
P2005 8 | P925 8 | P902 2 | P2991 2
FROM BACK UP SUB
MOTOR CURRENT IS FEED BACK TO THE TORQUE CONTROL
IC2302
(CAP DRIVE)
RIPPLE CANCEL
TORQUE CONTROL
TORQUE DIRECTION
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
POSITION SIGNAL PROCESS
CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L)
IC2302 ① ③ ㉓
2.5Vp-p
M1 P2302 6
M2 P2302 4
M3 P2302 15
<FG1>
<FG2>
IC2304
WAVE FORM SHAPER & AMP
D2305
D2304, IC2305
LIM. AMP
IC2306
AMP
FG1 P2302 3
FG2 P2302 5
FG1
FG2
90° PHASE DIFFERENCE
H3- P2302 7
H3+ P2302 9
H2- P2302 10
H2+ P2302 12
H1- P2302 11
H1+ P2302 13
DD CAPSTAN MOTOR
IC2301-1
IC2301-2
IC2301-17
13.5Vp-p
BACK UP 5V
P2003 2 | P922 11 | P964 1 | P6601 1
TO FRONT1
IC2301
TORQUE CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SCHMIT
IC2301-8
0.3Vp-p
IC2301-9
5.6msec
M1 P2301 10
M2 P2301 1
M3 P2301 4
MOTOR 14V
+5V
VM P2301 7
VH+ P2301 2
HALL IC
HCM
HEM
HE- P2301 9
HE+ P2301 3
DD CYLINDER MOTOR
S-REEL VM
P2006 1 | P2702 1
T-REEL VM
P2006 3 | P2702 3
TO REEL DRIVE
D2915
T-REEL OVER VOLTAGE DETECTOR
D2916
M 12V
P2005 4 | P925 4 | P912 6 | P1003 6
FROM POWER (1)

VIDEO (2) BLOCK DIAGRAM


IC3 (3/3)
(Y REC GATE)
Q1
BUFF
MOTHER C. B. A.
FROM SERVO
P2001 P924 P932 P8001
1 12 30A 30A
REC GATE Ⓛ
Ⓛ
5
3
Q2
BUFF
IC3 (1/3)
(C REC GATE)
FROM VIDEO (3)
P3001 P933 P932 P8001
22B 22B 22A 22A
REC Y
FL BLK
IC3 (2/3)
(Y COL/BW SELECT)
13
12
TO VIDEO (3)
P3001 P933 P932 P8001
10A 10A 10A 10A
COLOR Ⓗ
(COLOR Ⓗ)
QR7
SW
Q24, R33, C101
DC CONV KILLER SW
IC1 (C MAIN PROCESSER)
15
REC OUT AMP & KILLER SW
14
TP800
BURST 6dB DOWN
3
FL5
P
R
19
ACC AMP
BM
Ⓡ BURST 6dB UP
Ⓟ BURST 6dB DOWN
5
9
AFC F. C
DET
3.58M VCO
29
31
FL7
1.6M LPF
4.8M BPF
FL3
3.58M B. P. F.
10
FROM VIDEO (3)
P3001 P933 P932 P8001
14A 14A 14B 14B
P3001 P933 P932 P8001
21B 21B 21B 21B
OSD OUT
HSS
12
R P
6
ROTARY
SUB BM 4.21M
33
TO SERVO
P2002 P923 P932 P8001
9 4 32A 32A
ROTARY SW
320fH VCO
AFC
COMB AMP
2
PB OUT AM KILLER SW
38
VR2
PB CHROMA
Q20, Q21
BUFF
C OUT
34
MM
17
TP4
13
P. B AMP
11
L26, L27 C93, C94
LPF BLK
TP8004 0.4Vp-p PLAY
V
TO VIDEO (3)
P3001 P933 P932 P8001
16A 16A 16A 16A
YNR IN
IC2
6 IN
1H DL CCD
4 OUT
7 CLK
Q3
BUFF
FL1
LPF
YNR OUT
X1 Q4
BUFF

REF. NO. 8000 SERIES


IC3 (3/3)
(Y REC GATE)
Q1
BUFF
IC3 (1/3)
(C REC GATE)
5
3
Q2
BUFF
TP8001 5.0Vp-p PLAY
V
TP1
P8002
P501
REC Y
VR1
REC Y CURR
REC C
VR2
REC C CURR
HEAD AMP SW
HEAD SW
RF Y
Q1
Q2
BUFF
ENV SEL
TRACK ENV
RF CHROMA
IC501 (REC & HEAD AMP)
20
14
3
32
24
EQ
ENV DET
H. AMP SW
PEAKING
AGC AMP
BUFFER
COMP
ENV DET
REF. NO. 500 SERIES
HEAD AMP C. B. A.
TP508 0.1V
MOTHER C. B. A.
P8001
P932
P923
P2002
P933
P3001
P922
P2003
P924
P2001
TO SERVO
TO VIDEO (3)
FROM SERVO
14
3
5
9
29
31
33
2
38
17
11
FL5
BM
Ⓡ BURST 6dB UP
Ⓟ BURST 6dB DOWN
AFC F. C
DET
3.58M VCO
FL7
1.6M LPF
4.8M BPF
COMB AMP
PB OUT AM KILLER SW
VR2
PB CHROMA
Q20, Q21
BUFF
C OUT
TO VIDEO (3)
L26, L27 C93, C94
LPF BLK
Q3
BUFF
FL1
LPF
YNR OUT
TO VIDEO (3)
REF. NO. 8000 SERIES

P8001	P932	P923	P2002
28	28	11	2
27B	27B	12	1

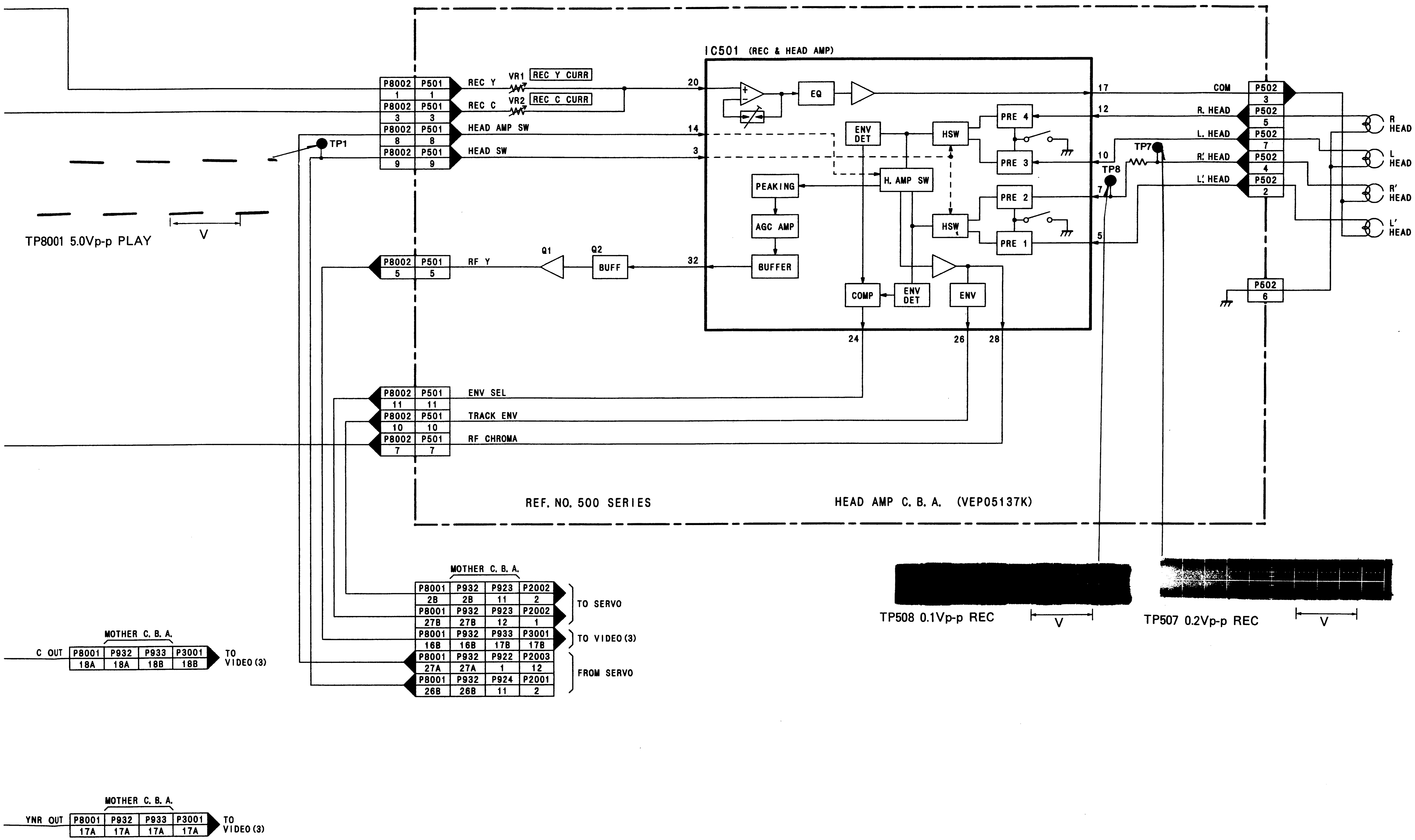
P8001	P932	P933	P3001
16B	16B	17B	17B

P8001	P932	P922	P2003
27A	27A	1	12

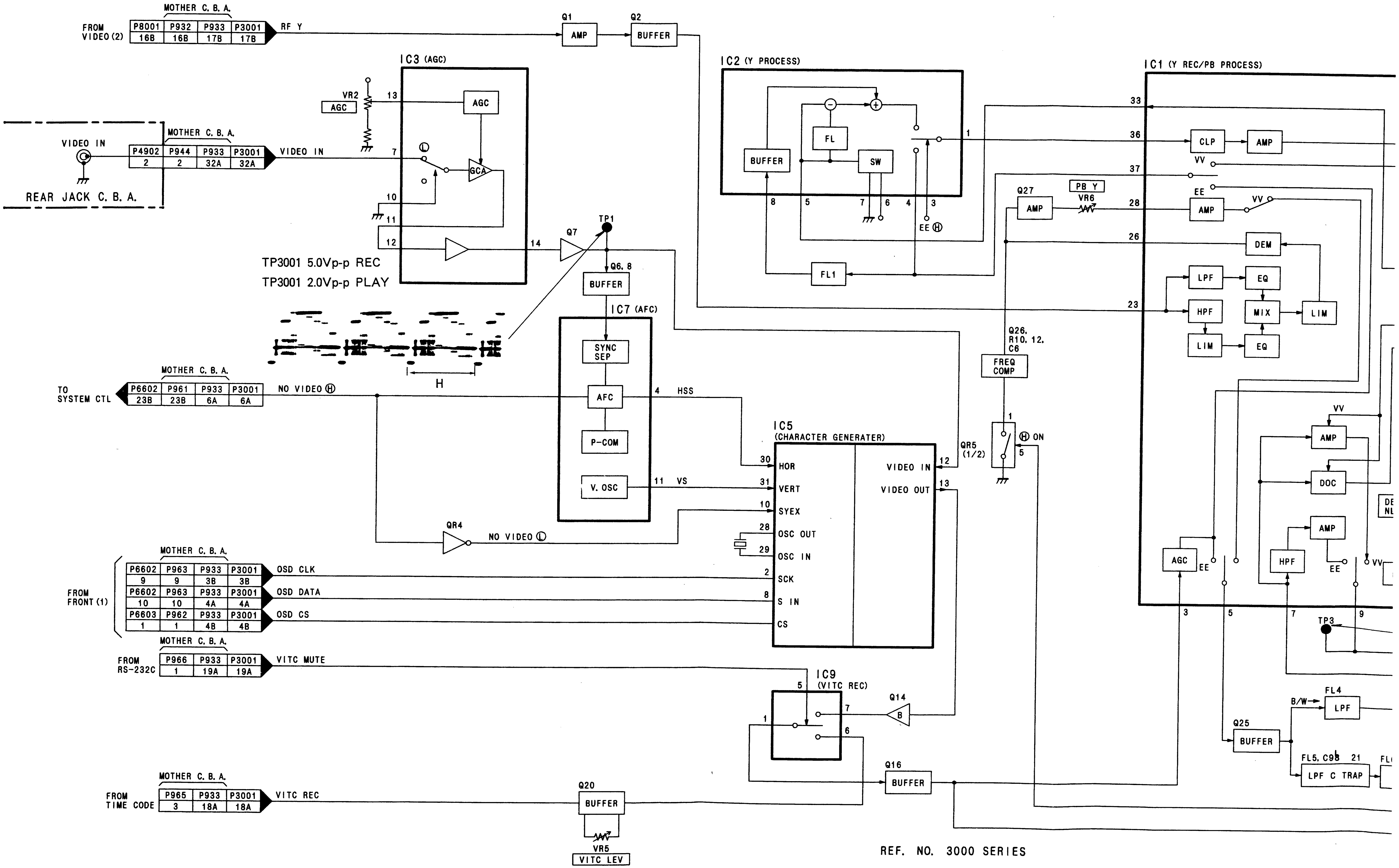
P8001	P932	P924	P2001
26B	26B	11	2

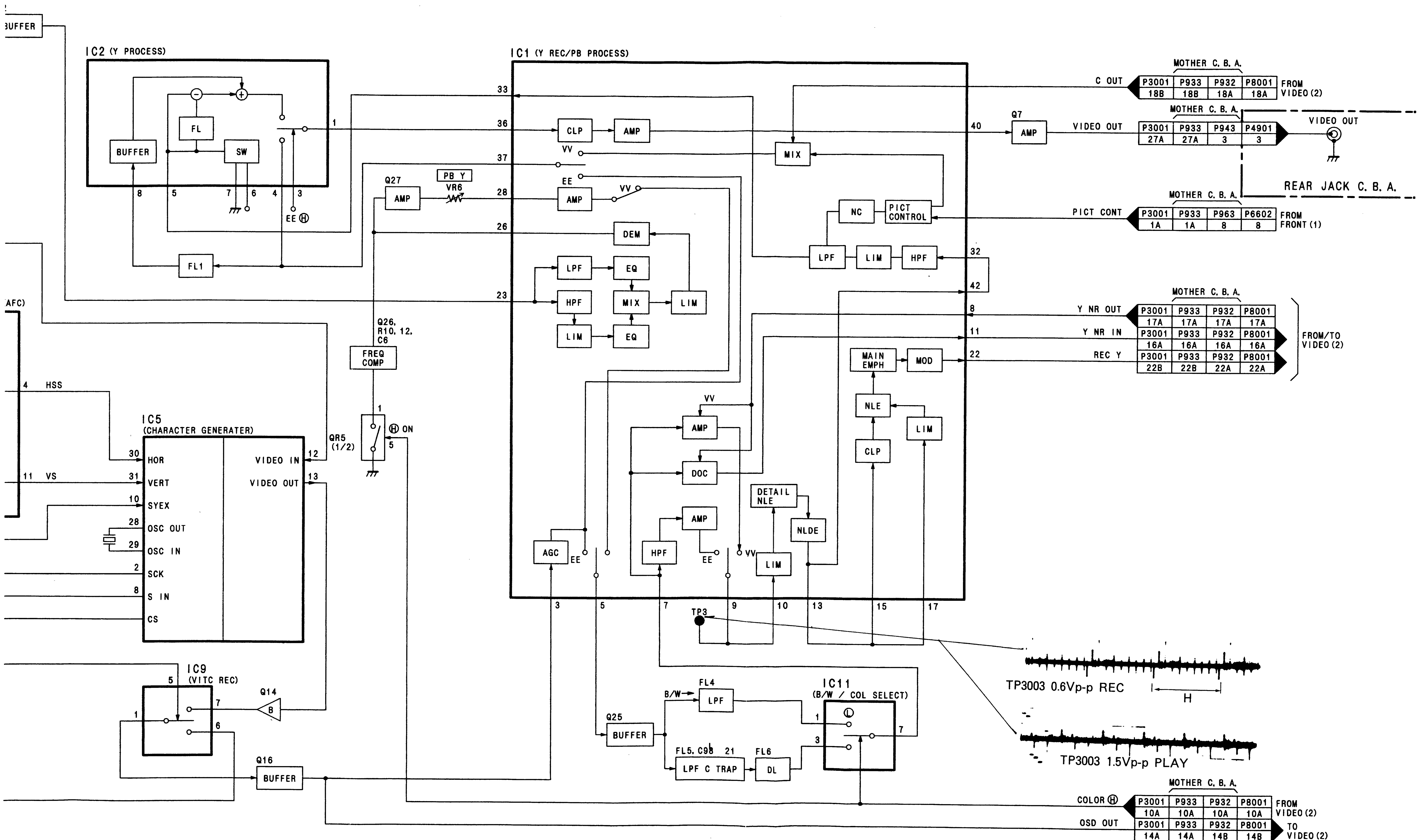
P8001	P932	P933	P3001
18A	18A	18B	18B

P8001	P932	P933	P3001
17A	17A	17A	17A


IC501 (REC & HEAD AMP)
P8002
P501
REC Y
REC C
HEAD AMP SW
HEAD SW
VR1
REC Y CURR
VR2
REC C CURR
TP1
TP8001 5.0Vp-p PLAY
V
EQ
ENV DET
HSW
PRE 4
PRE 3
PRE 2
PRE 1
H. AMP SW
PEAKING
AGC AMP
BUFFER
COMP
ENV
RF Y
Q1
Q2
BUFF
20
14
3
32
17
12
10
7
5
24
26
28
COM
R. HEAD
L. HEAD
R' HEAD
L' HEAD
P502
TP7
TP8
R HEAD
L HEAD
R' HEAD
L' HEAD
ENV SEL
TRACK ENV
RF CHROMA
REF. NO. 500 SERIES
HEAD AMP C. B. A. (VEP05137K)
MOTHER C. B. A.
P8001
P932
P923
P2002
P933
P3001
P922
P2003
P924
P2001
TO SERVO
TO VIDEO (3)
FROM SERVO
TP508 0.1Vp-p REC
TP507 0.2Vp-p REC
C OUT
YNR OUT
TO VIDEO (3)

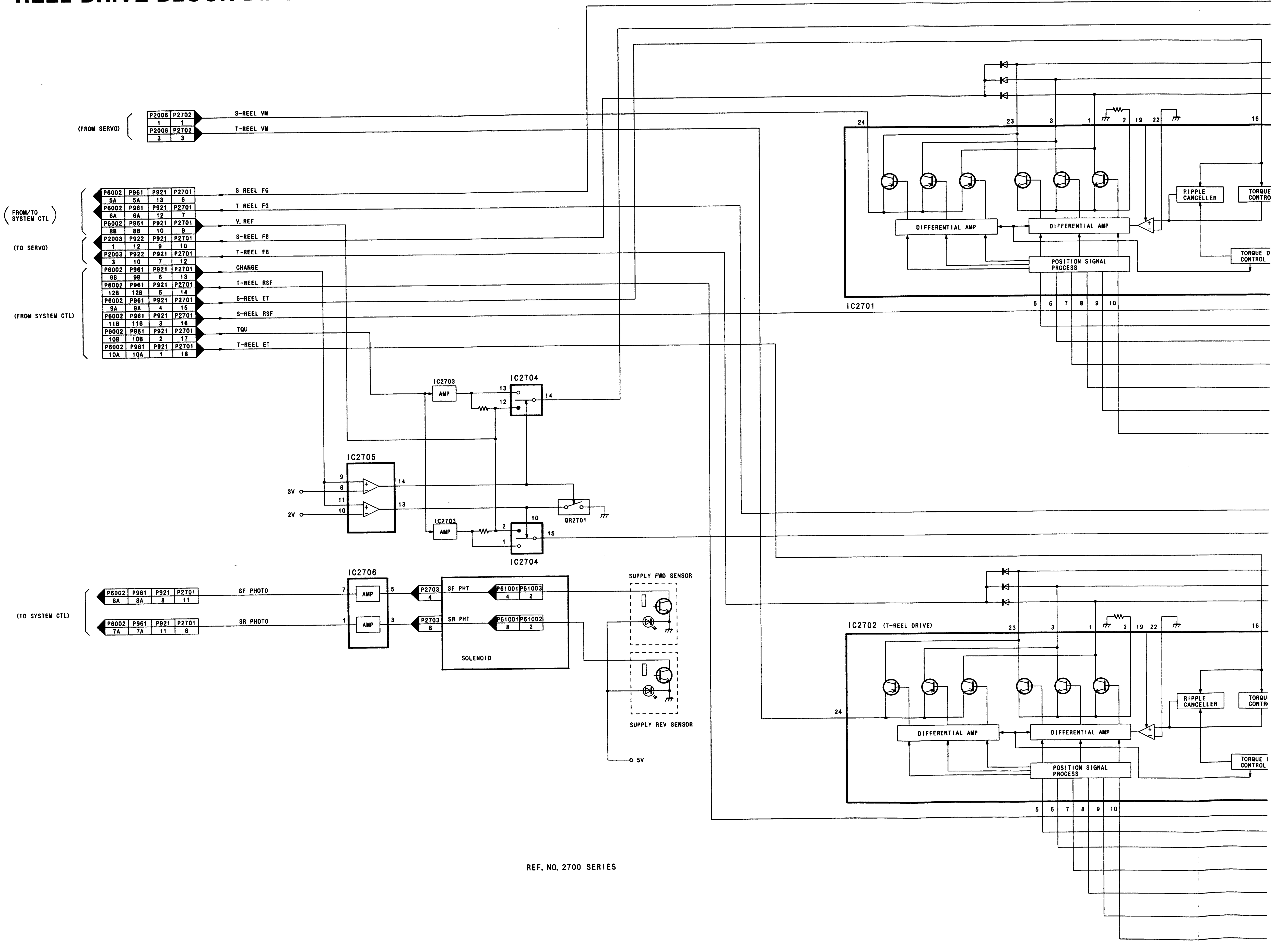
VIDEO (3) BLOCK DIAGRAM


FROM VIDEO (2)
MOTHER C. B. A.
P8001 16B
P932 16B
P933 17B
P3001 17B
RF Y
Q1
AMP
Q2
BUFFER
IC3 (AGC)
VR2
AGC
13
7
10
11
12
14
GCA
VIDEO IN
REAR JACK C. B. A.
P4902 2
P944 2
P933 32A
P3001 32A
VIDEO IN
Q7
TP1
Q6, 8
BUFFER
TP3001 5.0Vp-p REC
TP3001 2.0Vp-p PLAY
H
IC7 (AFC)
SYNC SEP
AFC
P-COM
V. OSC
4 HSS
11 VS
TO SYSTEM CTL
P6602 23B
P961 23B
P933 6A
P3001 6A
NO VIDEO Ⓗ
QR4
NO VIDEO Ⓛ
IC2 (Y PROCESS)
BUFFER
FL
SW
FL1
8 5 7 6 4 3 1
EE Ⓗ
IC5 (CHARACTER GENERATER)
30 HOR
31 VERT
10 SYEX
28 OSC OUT
29 OSC IN
2 SCK
8 S IN
CS
VIDEO IN 12
VIDEO OUT 13
FROM FRONT (1)
P6602 9
P963 9
P933 3B
P3001 3B
OSD CLK
P6602 10
P963 10
P933 4A
P3001 4A
OSD DATA
P6603 1
P962 1
P933 4B
P3001 4B
OSD CS
FROM RS-232C
P966 1
P933 19A
P3001 19A
VITC MUTE
IC9 (VITC REC)
5 1 7 6
Q14
B
Q16
BUFFER
FROM TIME CODE
P965 3
P933 18A
P3001 18A
VITC REC
Q20
BUFFER
VR5
VITC LEV
Q27
AMP
PB Y
VR6
Q26, R10, 12, C6
FREQ COMP
QR5 (1/2)
1
5
Ⓗ ON
IC1 (Y REC/PB PROCESS)
33
36
37
28
26
23
CLP
AMP
VV
EE
AMP
VV
DEM
LPF
EQ
HPF
MIX
LIM
LIM
EQ
VV
AMP
DOC
AMP
HPF
AGC
EE
EE
VV
3 5 7 9
TP3
FL4
B/W
LPF
Q25
BUFFER
FL5, C98 21
LPF C TRAP
REF. NO. 3000 SERIES

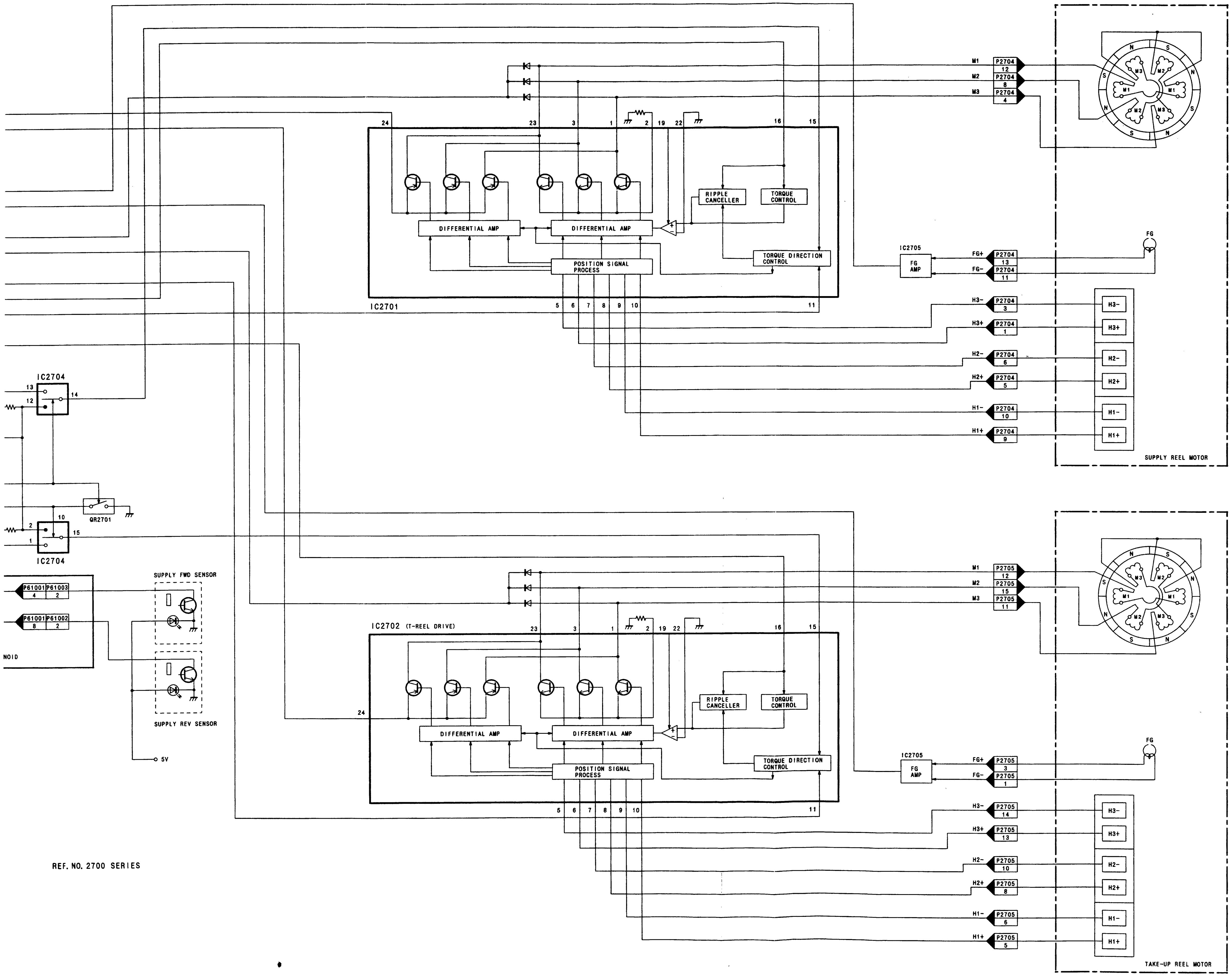

3UFFER
IC2 (Y PROCESS)
BUFFER
FL
SW
FL1
EE Ⓗ
IC1 (Y REC/PB PROCESS)
CLP
AMP
MIX
VV
EE
Q27
AMP
PB Y
VR6
DEM
LPF
EQ
HPF
MIX
LIM
NC
PICT CONTROL
LPF
LIM
HPF
Q26, R10, 12, C6
FREQ COMP
QR5 (1/2)
Ⓗ ON
MAIN EMPH
MOD
NLE
LIM
CLP
AMP
DOC
DETAIL NLE
NLDE
AGC
TP3
AFC)
4 HSS
11 VS
IC5 (CHARACTER GENERATER)
HOR
VERT
SYEX
OSC OUT
OSC IN
SCK
S IN
CS
VIDEO IN
VIDEO OUT
IC9 (VITC REC)
Q14
Q16
BUFFER
Q25
BUFFER
FL4
B/W
LPF
FL5, C98 21
FL6
LPF C TRAP
DL
IC11 (B/W / COL SELECT)
Ⓛ
Q7
AMP
C OUT
VIDEO OUT
PICT CONT
Y NR OUT
Y NR IN
REC Y
COLOR Ⓗ
OSD OUT
MOTHER C. B. A.
P3001 18B | P933 18B | P932 18A | P8001 18A — FROM VIDEO (2)
P3001 27A | P933 27A | P943 3 | P4901 3
VIDEO OUT
REAR JACK C. B. A.
P3001 1A | P933 1A | P963 8 | P6602 8 — FROM FRONT (1)
P3001 17A | P933 17A | P932 17A | P8001 17A
P3001 16A | P933 16A | P932 16A | P8001 16A
P3001 22B | P933 22B | P932 22A | P8001 22A
FROM/TO VIDEO (2)
P3001 10A | P933 10A | P932 10A | P8001 10A — FROM VIDEO (2)
P3001 14A | P933 14A | P932 14B | P8001 14B — TO VIDEO (2)
TP3003 0.6Vp-p REC
H
TP3003 1.5Vp-p PLAY

REF. NO. 3000 SERIES

REEL DRIVE BLOCK DIAGRAM

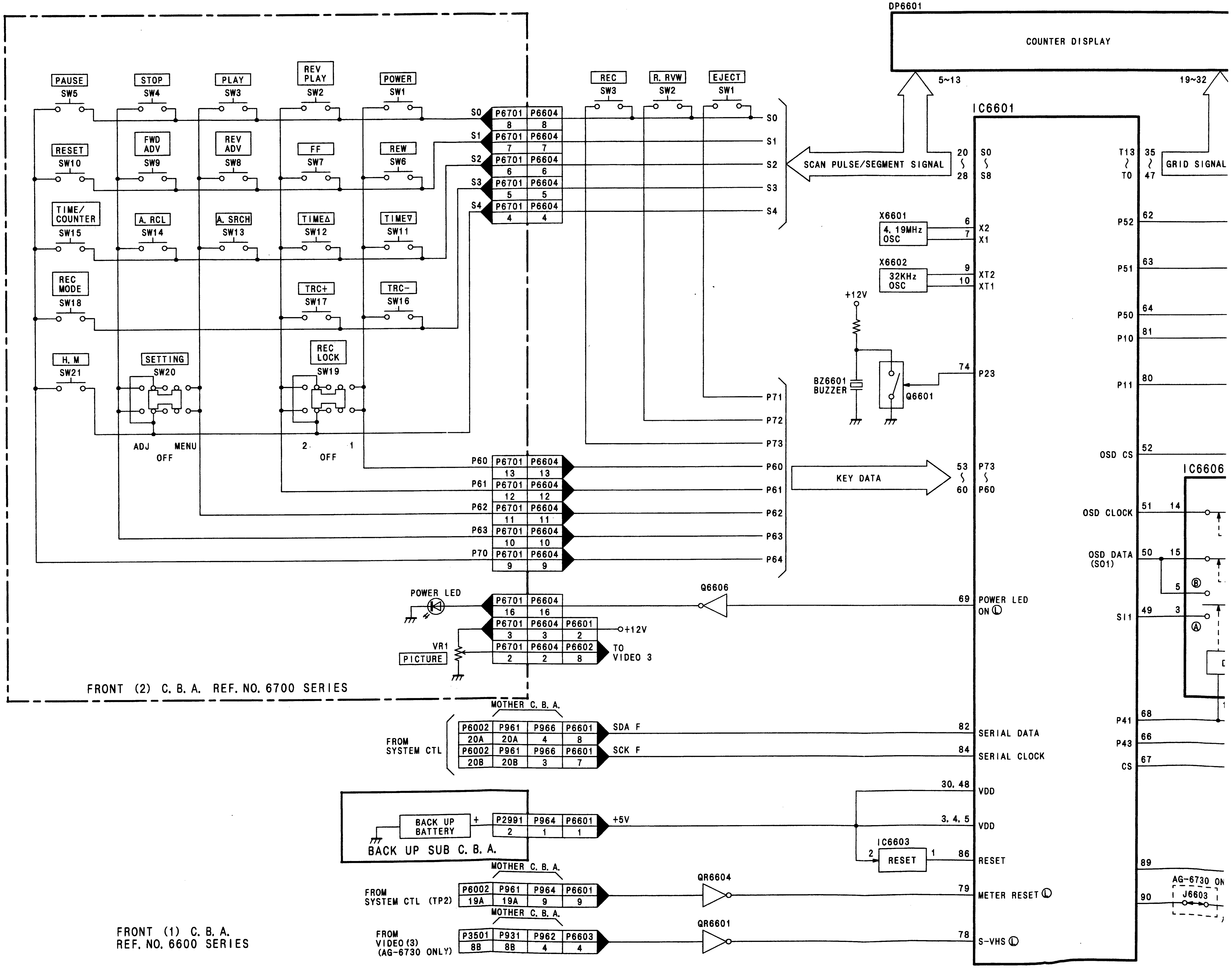

(FROM SERVO)
P2006 P2702 1 1
P2006 P2702 3 3
S-REEL VM
T-REEL VM
(FROM/TO SYSTEM CTL)
(TO SERVO)
(FROM SYSTEM CTL)
P6002 P961 P921 P2701 5A 5A 13 6
P6002 P961 P921 P2701 6A 6A 12 7
P6002 P961 P921 P2701 8B 8B 10 9
P2003 P922 P921 P2701 1 12 9 10
P2003 P922 P921 P2701 3 10 7 12
P6002 P961 P921 P2701 9B 9B 6 13
P6002 P961 P921 P2701 12B 12B 5 14
P6002 P961 P921 P2701 9A 9A 4 15
P6002 P961 P921 P2701 11B 11B 3 16
P6002 P961 P921 P2701 10B 10B 2 17
P6002 P961 P921 P2701 10A 10A 1 18
S REEL FG
T REEL FG
V. REF
S-REEL FB
T-REEL FB
CHANGE
T-REEL RSF
S-REEL ET
S-REEL RSF
TQU
T-REEL ET
IC2703
AMP
IC2704
IC2705
3V
2V
QR2701
IC2706
AMP
(TO SYSTEM CTL)
P6002 P961 P921 P2701 8A 8A 8 11
P6002 P961 P921 P2701 7A 7A 11 8
SF PHOTO
SR PHOTO
P2703 4
P2703 8
SF PHT
SR PHT
P61001 P61003 4 2
P61001 P61002 8 2
SOLENOID
SUPPLY FWD SENSOR
SUPPLY REV SENSOR
5V
IC2701
IC2702 (T-REEL DRIVE)
DIFFERENTIAL AMP
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
RIPPLE CANCELLER
TORQUE CONTRO
TORQUE D CONTROL
24
23
3
1
2
19
22
16
5 6 7 8 9 10

REF. NO. 2700 SERIES


IC2701
DIFFERENTIAL AMP
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
RIPPLE CANCELLER
TORQUE CONTROL
TORQUE DIRECTION CONTROL
IC2705
FG AMP
M1 P2704 12
M2 P2704 8
M3 P2704 4
FG+ P2704 13
FG- P2704 11
FG
H3- P2704 3
H3+ P2704 1
H2- P2704 6
H2+ P2704 5
H1- P2704 10
H1+ P2704 9
SUPPLY REEL MOTOR
IC2704
QR2701
IC2704
P61001 4
P61003 2
P61001 8
P61002 2
NOID
SUPPLY FWD SENSOR
SUPPLY REV SENSOR
5V
IC2702 (T-REEL DRIVE)
IC2705
FG AMP
M1 P2705 12
M2 P2705 15
M3 P2705 11
FG+ P2705 3
FG- P2705 1
H3- P2705 14
H3+ P2705 13
H2- P2705 10
H2+ P2705 8
H1- P2705 6
H1+ P2705 5
TAKE-UP REEL MOTOR

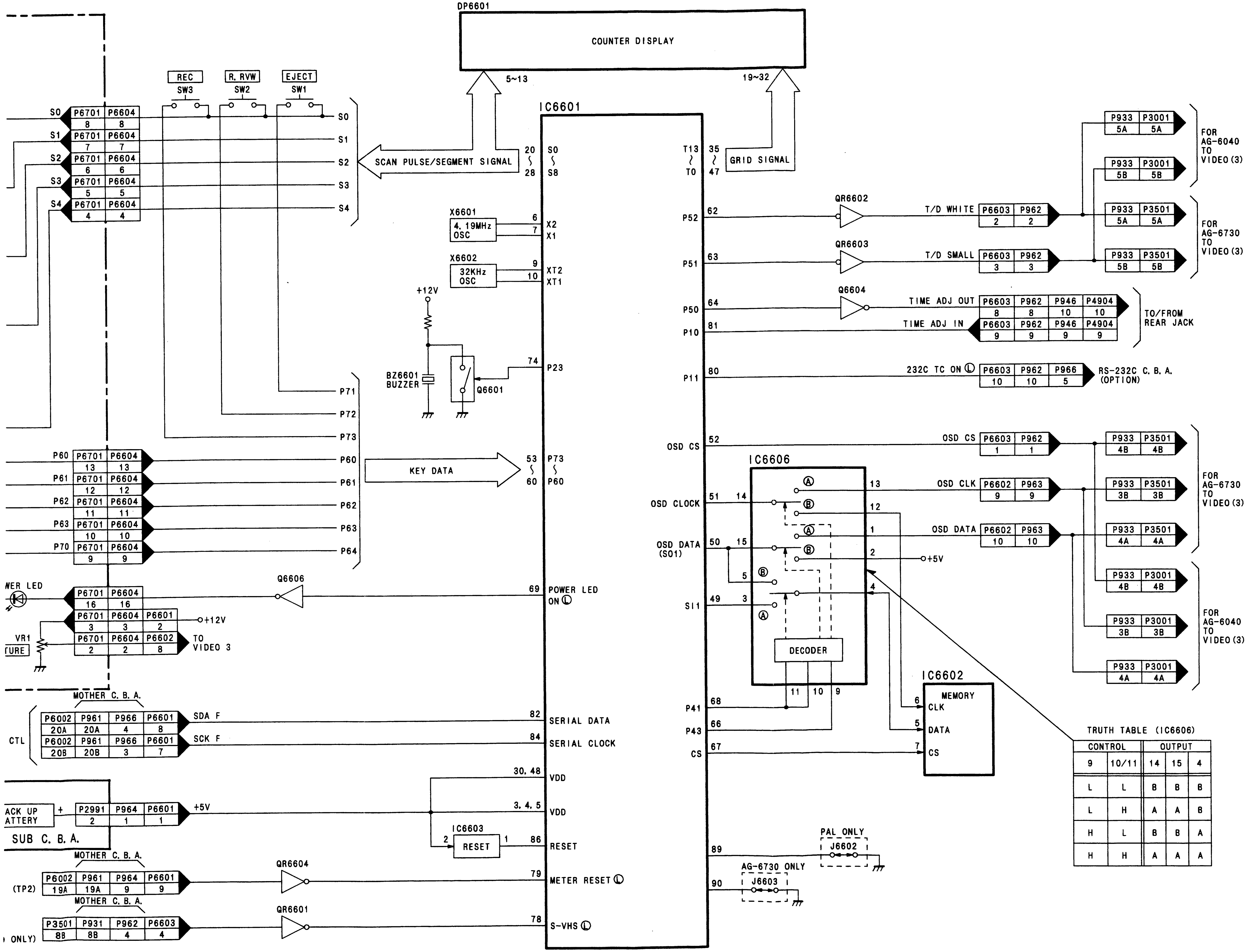
REF. NO. 2700 SERIES

FRONT (1) AND FRONT (2) BLOCK DIAGRAM



DP6601
COUNTER DISPLAY
5~13
19~32
IC6601
PAUSE
SW5
STOP
SW4
PLAY
SW3
REV PLAY
SW2
POWER
SW1
RESET
SW10
FWD ADV
SW9
REV ADV
SW8
FF
SW7
REW
SW6
TIME/ COUNTER
SW15
A. RCL
SW14
A. SRCH
SW13
TIME∆
SW12
TIME∇
SW11
REC MODE
SW18
TRC+
SW17
TRC−
SW16
H. M
SW21
SETTING
SW20
REC LOCK
SW19
ADJ
MENU
OFF
2
1
OFF
REC
SW3
R. RVW
SW2
EJECT
SW1
S0
S1
S2
S3
S4
P6701
P6604
SCAN PULSE/SEGMENT SIGNAL
20
28
S0
S8
T13
TO
35
47
GRID SIGNAL
X6601
4. 19MHz OSC
6
7
X2
X1
X6602
32KHz OSC
9
10
XT2
XT1
P52
62
P51
63
P50
64
P10
81
P11
80
+12V
74
P23
BZ6601 BUZZER
Q6601
P71
P72
P73
P60
P61
P62
P63
P64
P70
KEY DATA
53
60
P73
P60
OSD CS
52
IC6606
OSD CLOCK
51
14
OSD DATA (S01)
50
15
5
Ⓑ
SI1
49
3
Ⓐ
POWER LED
Q6606
69
POWER LED ON Ⓛ
P6601
P6602
+12V
VR1
PICTURE
TO VIDEO 3
FRONT (2) C. B. A. REF. NO. 6700 SERIES
MOTHER C. B. A.
FROM SYSTEM CTL
P6002
P961
P966
20A
20B
SDA F
SCK F
82
SERIAL DATA
84
SERIAL CLOCK
P41
68
P43
66
CS
67
30, 48
VDD
BACK UP BATTERY
P2991
P964
+5V
3, 4, 5
VDD
BACK UP SUB C. B. A.
IC6603
2
RESET
1
86
RESET
89
FROM SYSTEM CTL (TP2)
19A
QR6604
79
METER RESET Ⓛ
AG-6730 ON
90
J6603
FROM VIDEO (3) (AG-6730 ONLY)
P3501
P931
P962
P6603
8B
QR6601
78
S-VHS Ⓛ
FRONT (1) C. B. A. REF. NO. 6600 SERIES

GRAM


DP6601
COUNTER DISPLAY
5~13
19~32
IC6601
REC
SW3
R. RVW
SW2
EJECT
SW1
S0
S1
S2
S3
S4
P6701
P6604
SCAN PULSE/SEGMENT SIGNAL
20 ~ 28
S0 ~ S8
T13 ~ T0
35 ~ 47
GRID SIGNAL
X6601
4.19MHz OSC
X2
X1
X6602
32KHz OSC
XT2
XT1
+12V
BZ6601 BUZZER
Q6601
P23
P71
P72
P73
P60
P61
P62
P63
P64
P70
KEY DATA
53 ~ 60
P73 ~ P60
POWER LED
Q6606
POWER LED ON Ⓛ
VR1
P6601
P6602
TO VIDEO 3
MOTHER C. B. A.
CTL
P6002
P961
P966
SDA F
SCK F
SERIAL DATA
SERIAL CLOCK
30, 48
VDD
3, 4, 5
ACK UP ATTERY
P2991
P964
+5V
SUB C. B. A.
IC6603
RESET
(TP2)
QR6604
METER RESET Ⓛ
P3501
P931
P962
P6603
ONLY)
QR6601
S-VHS Ⓛ
P52
P51
P50
P10
P11
QR6602
T/D WHITE
QR6603
T/D SMALL
Q6604
TIME ADJ OUT
TIME ADJ IN
P946
P4904
TO/FROM REAR JACK
232C TC ON Ⓛ
RS-232C C. B. A. (OPTION)
P933
P3001
FOR AG-6040 TO VIDEO (3)
FOR AG-6730 TO VIDEO (3)
OSD CS
OSD CLOCK
OSD DATA (SO1)
SI1
IC6606
OSD CLK
OSD DATA
P963
DECODER
P41
P43
CS
IC6602
MEMORY
CLK
DATA
PAL ONLY
J6602
AG-6730 ONLY
J6603

TRUTH TABLE (IC6606)

CONTROL		OUTPUT		
9	10/11	14	15	4
L	L	B	B	B
L	H	A	A	B
H	L	B	B	A
H	H	A	A	A

Section 7

SCHEMATIC DIAGRAMS
AND
CIRCUIT BOARDS

CONTENTS

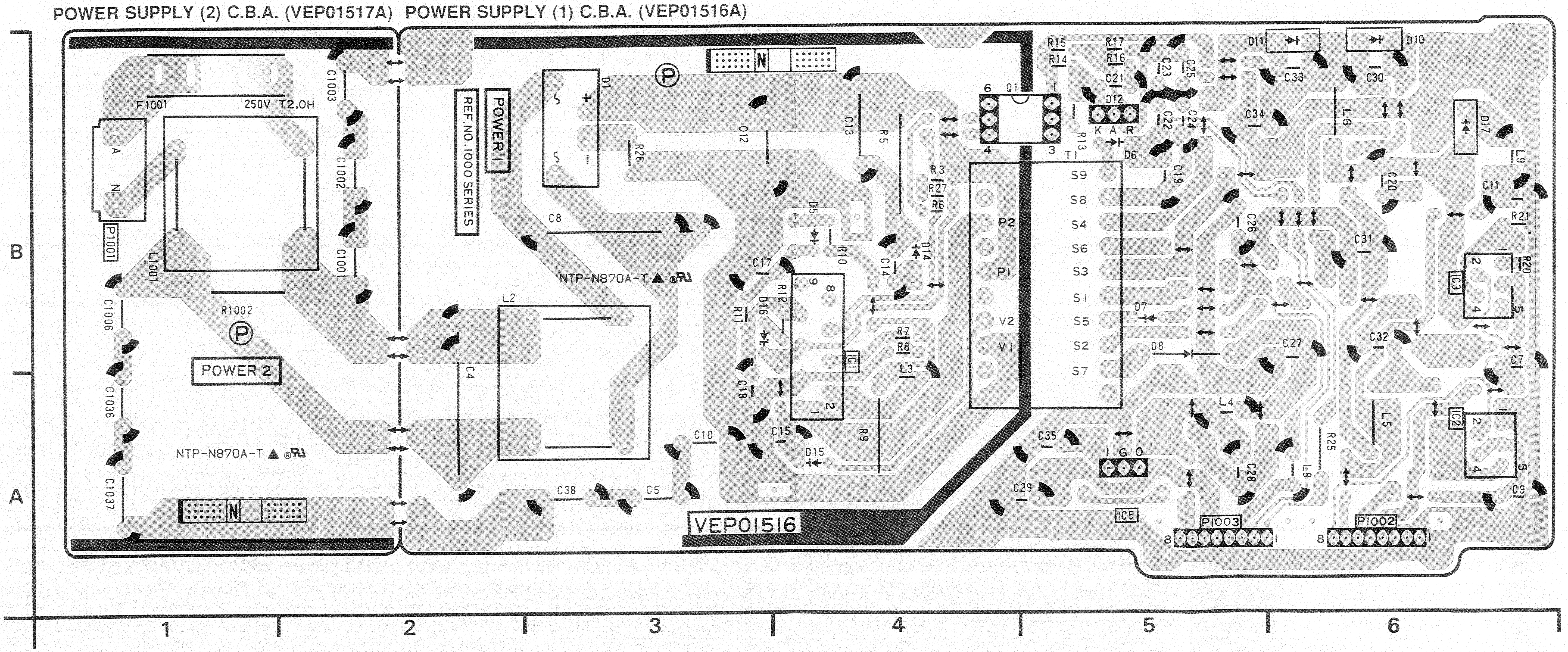
POWER SUPPLY (1) C.B.A. AND POWER SUPPLY (2) C.B.A. SCM-3
POWER SUPPLY (1) AND (2) SCHEMATIC DIAGRAM SCM-3
SYSTEM CONTROL SCHEMATIC DIAGRAM SCM-4
SYSTEM CONTROL C.B.A. SCM-5
SERVO C.B.A. SCM-6
SERVO SCHEMATIC DIAGRAM SCM-7
MOTOR DRIVE SECTION SCHEMATIC DIAGRAM SCM-8
REEL DRIVE C.B.A. SCM-9
REEL DRIVE SCHEMATIC DIAGRAM SCM-9
AUDIO SCHEMATIC DIAGRAM SCM-10
AUDIO C.B.A. SCM-10
FRONT (2) C.B.A. SCM-11
FRONT (2) SCHEMATIC DIAGRAM SCM-11
FRONT (1) C.B.A. SCM-12
FRONT (1) SCHEMATIC DIAGRAM SCM-13
VIDEO (2) C.B.A. SCM-14
VIDEO (2) SCHEMATIC DIAGRAM SCM-15
VIDEO (3) C.B.A. SCM-16
VIDEO (3) SCHEMATIC DIAGRAM SCM-17
HEAD AMP C.B.A. SCM-18
HEAD AMP SCHEMATIC DIAGRAM SCM-19
REAR JACK C.B.A. AND MIC AMP SUB C.B.A. SCM-20
REAR JACK SCHEMATIC DIAGRAM SCM-21
MOTHER C.B.A., BACK UP SUB C.B.A., MORTOR BASE CONNECTION UNIT AND MECHANISM CONNECTION UNIT SCM-22
MOTHER SCHEMATIC DIAGRAM SCM-23
INTERCONNECTION SCHEMATIC DIAGRAM SCM-24

NOTE : DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE : MEASUREMENT SIGNAL ... PAL COLOR SIGNAL. MEASUREMENT TAPE ... VHS TAPE.

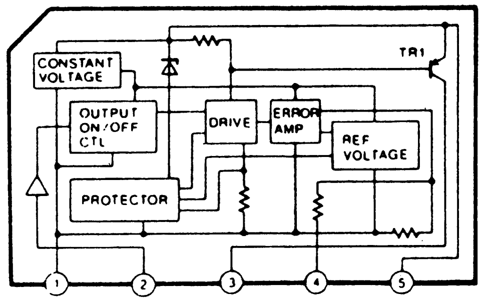
IMPORTANT SAFETY NOTICE :
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

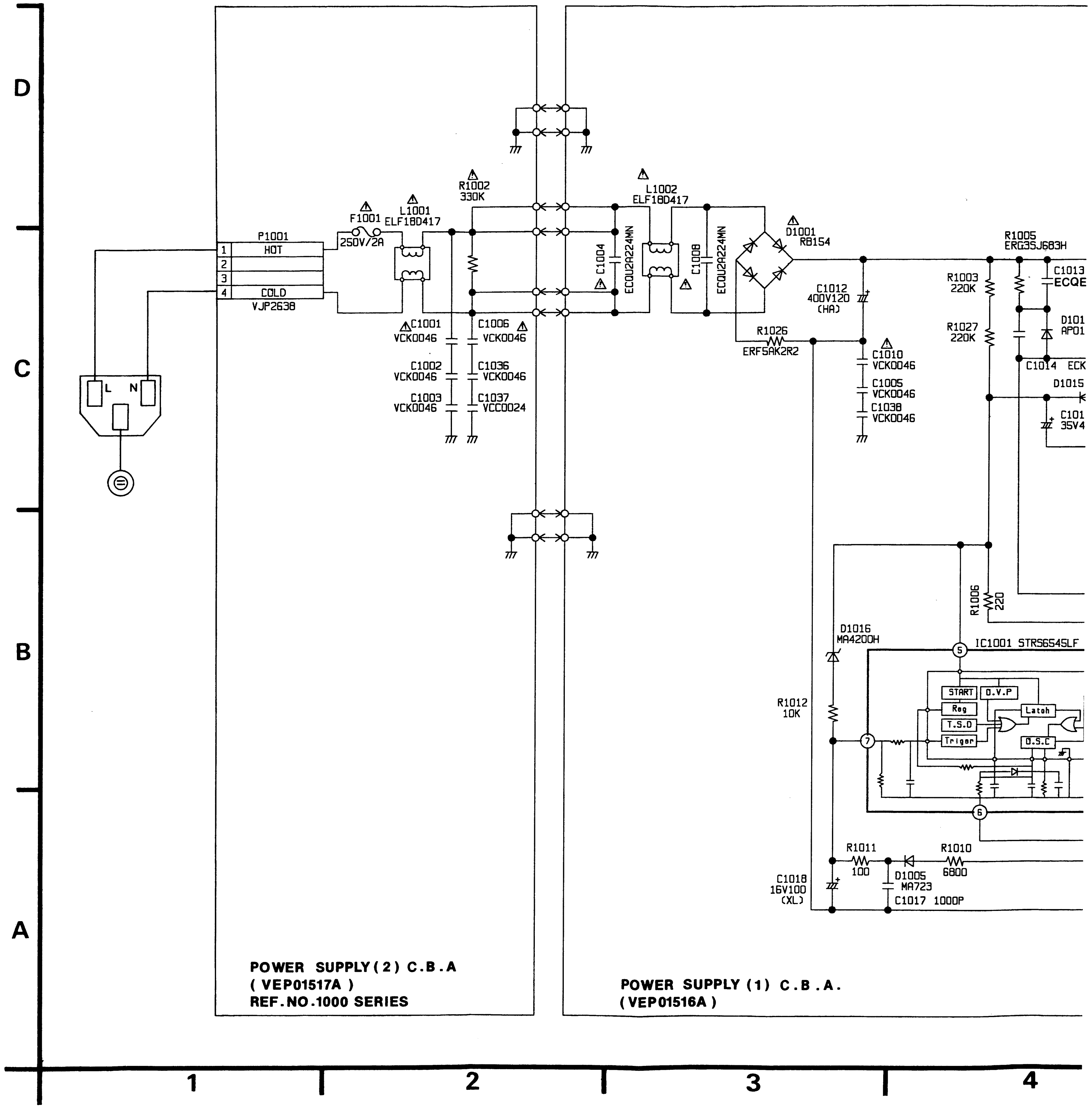
POWER SUPPLY (1) C.B.A. (VEP01516A) AND POWER SUPPLY (2) C.B.A. (VEP01517A)


POWER SUPPLY (2) C.B.A. (VEP01517A)
POWER SUPPLY (1) C.B.A. (VEP01516A)
F1001
250V T2.0H
P1001
L1001
C1003
C1002
C1001
C1006
C1036
C1037
R1002
POWER 2
NTP-N870A-T
POWER 1
REF.NO.1000 SERIES
D1
R26
C8
C4
L2
NTP-N870A-T
C12
C13
R5
D5
R10
C17
R12
R11
D16
C18
IC1
C15
D15
C10
C38
C5
VEP01516
R3
R27
R6
D14
C14
R7
R8
L3
R9
P2
P1
V2
V1
Q1
T1
S9
S8
S4
S6
S3
S1
S5
S2
S7
R15
R14
R17
R16
C21
D12
K A R
R13
D6
C23
C25
C22
C24
C19
D7
D8
C35
C29
I G O
IC5
P1003
P1002
D11
D10
C33
C30
C34
L6
D17
L9
C11
R21
C20
C26
C31
IC3
R20
C32
C27
C7
L4
L5
R25
IC2
C28
L8
C9
B
A
1
2
3
4
5
6

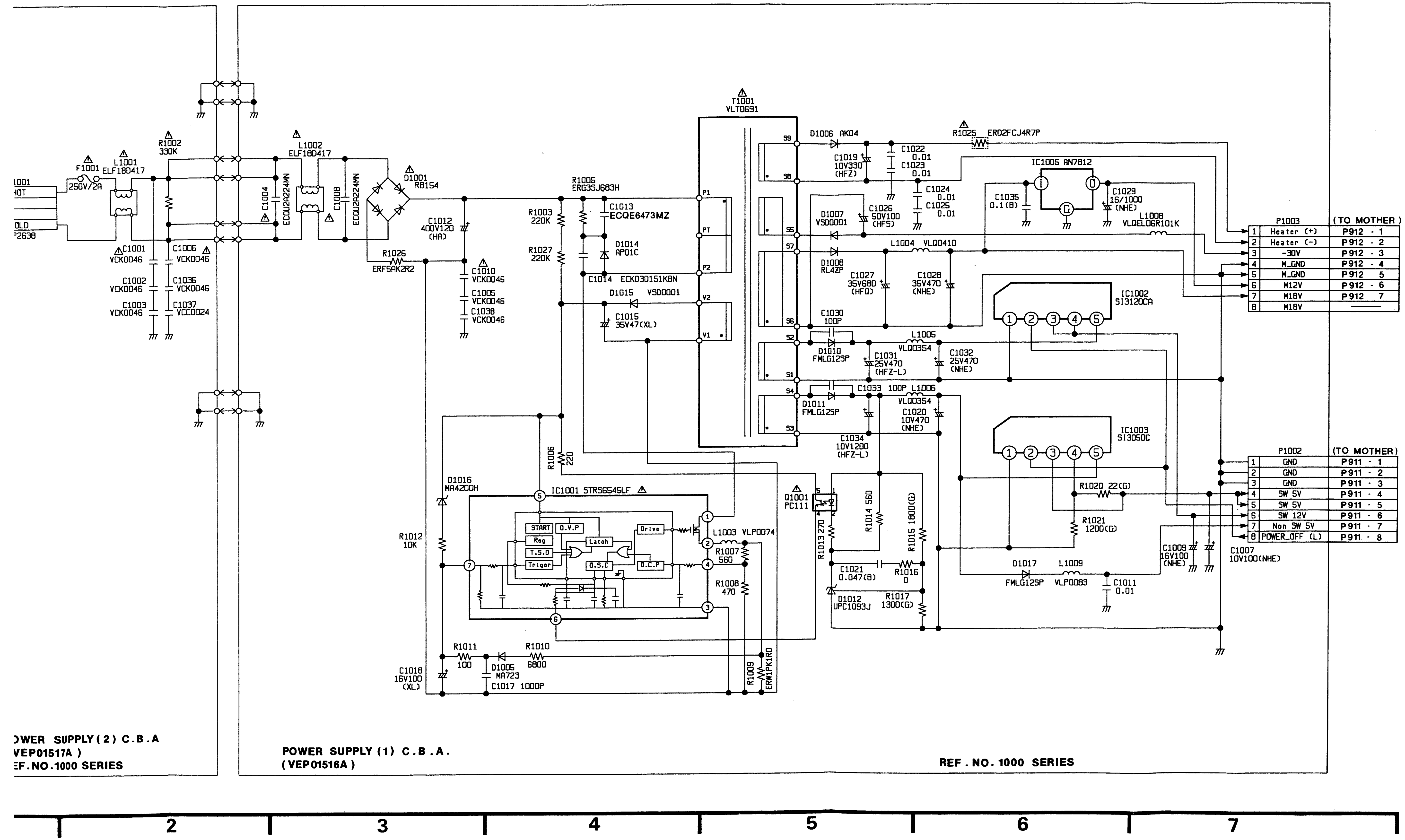
POWER SUPPLY (1) AND (2) SCHEMATIC DIAGRAM

IC1003 SI3050C


CONSTANT VOLTAGE
OUTPUT ON/OFF CTL
DRIVE
ERROR AMP
REF VOLTAGE
PROTECTOR
TR1
①
②
③
④
⑤

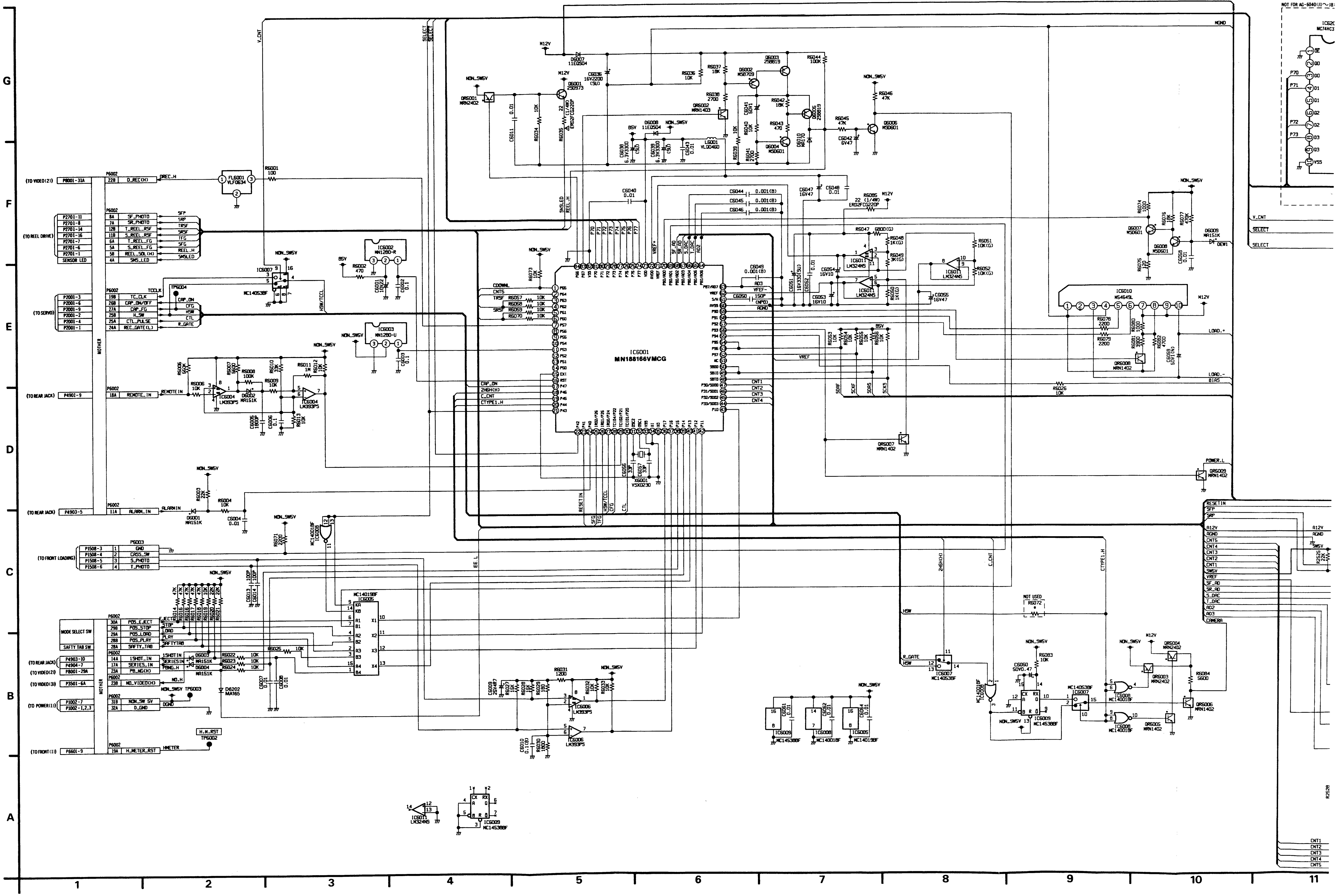

D
C
B
A
1
2
3
4
L
N
P1001
1 HOT
2
3
4 COLD
VJP2638
F1001
250V/2A
L1001
ELF18D417
R1002
330K
C1001
VCK0046
C1002
VCK0046
C1003
VCK0046
C1006
VCK0046
C1036
VCK0046
C1037
VCC0024
L1002
ELF18D417
C1004
ECQU2A224MN
C1008
ECQU2A224MN
D1001
RB154
C1012
400V120
(HA)
R1026
ERF5AK2R2
C1010
VCK0046
C1005
VCK0046
C1038
VCK0046
R1005
ERG3SJ683H
R1003
220K
R1027
220K
C1013
ECQE
D101
AP01
C1014 ECK
D1015
C101
35V4
R1006
220
D1016
MA4200H
IC1001 STRS6545LF
⑤
START
O.V.P
Reg
Latoh
T.S.D
Trigor
O.S.C
⑦
⑥
R1012
10K
R1011
100
D1005
MA723
R1010
6800
C1017 1000P
C1018
16V100
(XL)
POWER SUPPLY(2) C.B.A
(VEP01517A)
REF.NO.1000 SERIES
POWER SUPPLY (1) C.B.A.
(VEP01516A)

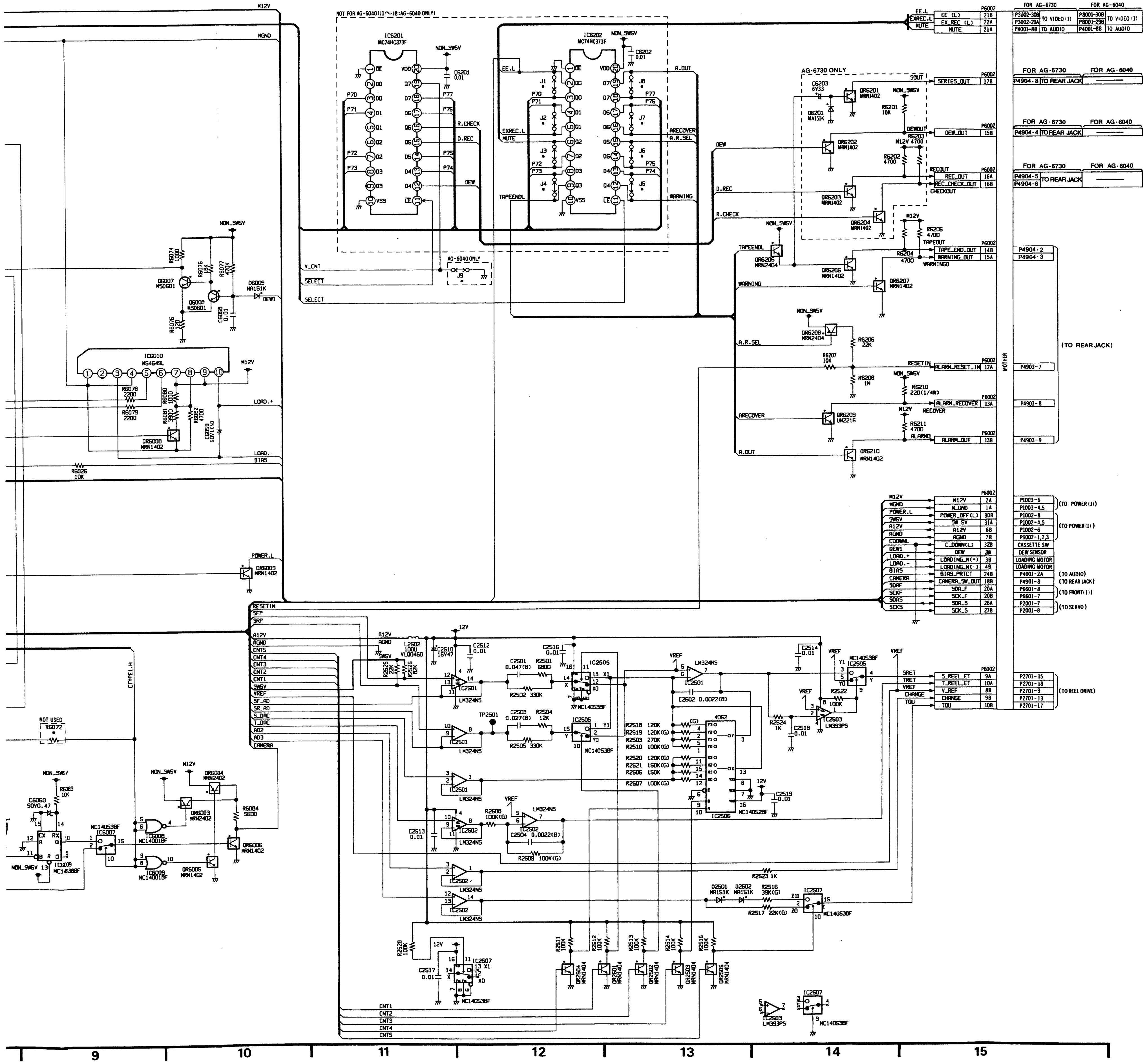
) AND (2) SCHEMATIC DIAGRAM



F1001
250V/2A
L1001
ELF18D417
R1002
330K
L1002
ELF18D417
C1004
ECQU2A224MN
C1008
ECQU2A224MN
D1001
RB154
C1001
VCK0046
C1006
VCK0046
C1002
VCK0046
C1036
VCK0046
C1003
VCK0046
C1037
VCC0024
C1012
400V120
(HA)
R1026
ERF5AK2R2
C1010
VCK0046
C1005
VCK0046
C1038
VCK0046
R1005
ERG35J683H
R1003
220K
R1027
220K
C1013
ECQE6473MZ
D1014
AP01C
C1014 ECKD3D151KBN
D1015 VSD0001
C1015
35V47(XL)
T1001
VLT0691
P1
PT
P2
V2
V1
S9
S8
S5
S7
S6
S2
S1
S4
S3
D1006 AK04
C1019
10V330
(HFZ)
C1022
0.01
C1023
0.01
C1024
0.01
C1025
0.01
C1026
50V100
(HFS)
D1007
VSD0001
D1008
RL4ZP
L1004 VLQ0410
C1027
35V680
(HFQ)
C1028
35V470
(NHE)
C1030
100P
R1025 ERD2FCJ4R7P
IC1005 AN7812
I
O
G
C1035
0.1(B)
C1029
16/1000
(NHE)
L1008
VLQEL06R101K
IC1002
SI3120CA
L1005
VLQ0354
D1010
FMLG125P
C1031
25V470
(HFZ-L)
C1032
25V470
(NHE)
C1033 100P
L1006
VLQ0354
D1011
FMLG125P
C1020
10V470
(NHE)
C1034
10V1200
(HFZ-L)
IC1003
SI3050C
P1003
(TO MOTHER)
1 Heater (+) P912 - 1
2 Heater (-) P912 - 2
3 -30V P912 - 3
4 M_GND P912 - 4
5 M_GND P912 5
6 M12V P912 - 6
7 M18V P912 7
8 M18V
P1002
(TO MOTHER)
1 GND P911 - 1
2 GND P911 - 2
3 GND P911 - 3
4 SW 5V P911 - 4
5 SW 5V P911 - 5
6 SW 12V P911 - 6
7 Non SW 5V P911 - 7
8 POWER_OFF (L) P911 - 8
R1006
220
D1016
MA4200H
IC1001 STR5654SLF
START
O.V.P
Reg
T.S.D
Triger
Latch
O.S.C
O.C.P
Drive
R1012
10K
L1003 VLP0074
R1007
560
R1008
470
Q1001
PC111
R1013 270
R1014 560
R1015 1800(G)
C1021
0.047(B)
R1016
0
D1012
UPC1093J
R1017
1300(G)
R1020 22(G)
R1021
1200(G)
D1017
FMLG125P
L1009
VLP0083
C1011
0.01
C1009
16V100
(NHE)
C1007
10V100(NHE)
R1011
100
D1005
MA723
R1010
6800
C1017 1000P
C1018
16V100
(XL)
R1009
ERW1PK1R0
OWER SUPPLY (2) C.B.A
VEP01517A)
EF.NO.1000 SERIES
POWER SUPPLY (1) C.B.A.
(VEP01516A)
REF. NO. 1000 SERIES
2
3
4
5
6
7

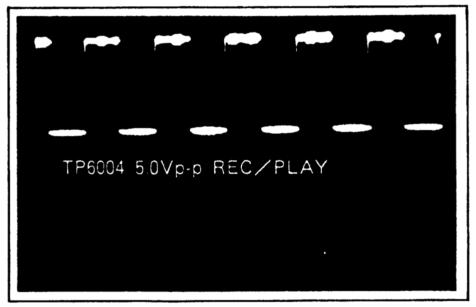
SYSTEM CONTROL SCHEMATIC DIAGRAM


IC6001
MN188166VMCG
IC6002
MN1280-R
IC6003
MN1280-U
IC6004
LM393PS
IC6005
MC14019BF
IC6006
LM393PS
IC6007
MC14538F
IC6008
MC14001BF
IC6009
MC14538BF
IC6010
NS4649L
IC6011
LM324NS
FL6001
VLF0634
X6001
VSX0230
L6001
VLO0460
Q6001
2SD973
Q6002
NSB709
Q6003
2SB819
Q6004
MSD601
Q6005
2SB819
Q6006
MSD601
Q6007
MSD601
Q6008
MSD601
QR6001
MRN2402
QR6002
MRN1403
QR6003
MRN2402
QR6004
MRN2402
QR6005
MRN1402
QR6006
MRN1402
QR6007
MRN1402
QR6008
MRN1402
QR6009
MRN1402
D6001
MA151K
D6002
MA151K
D6003
MA151K
D6004
MA151K
D6005
MA151K
D6007
11EQS04
D6008
11EQS04
D6202
MA165
MOTHER
(TO VIDEO(2))
(TO REEL DRIVE)
(TO SERVO)
(TO REAR JACK)
(TO FRONT LOADING)
MODE SELECT SW
SAFTY TAB SW
(TO VIDEO(3))
(TO POWER(1))
(TO FRONT(1))
NOT USED
NOT FOR AG-6040(J1~J8)
M12V
MGND
NON_SW5V
B5V
V_CNT
SELECT
POWER.L
LOAD.+
LOAD.-
BIAS
RESETIN
H.M.RST
TP6002
TP6003
TP6004
1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G

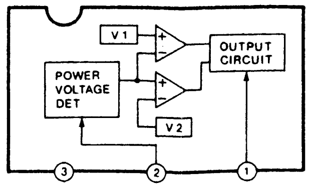

NOT FOR AG-6040(J1～J8:AG-6040 ONLY)
IC6201 MC74HC373F
IC6202 MC74HC373F
AG-6730 ONLY
FOR AG-6730
FOR AG-6040
TO VIDEO (1)
TO AUDIO
TO REAR JACK
(TO REAR JACK)
MOTHER
IC6010 M54649L
(TO POWER (1))
(TO AUDIO)
(TO FRONT(1))
(TO SERVO)
(TO REEL DRIVE)
IC2501 LM324NS
IC2502 LM324NS
IC2505 MC14053BF
IC2506 MC14052BF
IC2507 MC14053BF
IC2503 LM393PS
IC6007 MC14538BF
IC6008 MC14001BF
9
10
11
12
13
14
15

SYSTEM CONTROL TRs DC VOLTAGE CHART

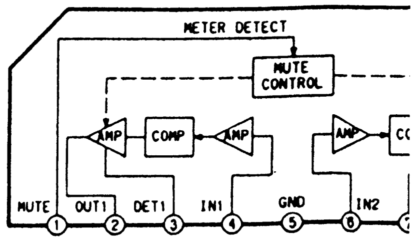
REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C
PLAY	0.6	11.8	0.7	11.1	0	11.6	11.6	0	11.1	0	0	0	0	0
REF. NO.	Q6007			Q6008										
MODE	E	C	B	E	C	B								
PLAY	0.6	0.6	1.3	0	9.7	0								
REF. NO.	QR2501			QR2502			QR2503			QR2504			QR2	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C
PLAY	0	12.0	0	0	0	5.0	0	12.0	0	0	0	5.0	0	0
REF. NO.	QR6002			QR6003			QR6004			QR6005			QR6	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C
PLAY	0	11.6	0	5.3	11.7	5.5	11.8	11.7	0	0	0	5.1	0	11
REF. NO.	QR6008			QR6009			QR6205			QR6206			QR6	
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C
PLAY	0	9.7	0	0	3.4	0	5.3	0	5.1	0	11.8	0	0	11
REF. NO.	QR6209			QR6210										
MODE	E	C	B	E	C	B								
PLAY	0	0.1	5.0	0	0	5.0								

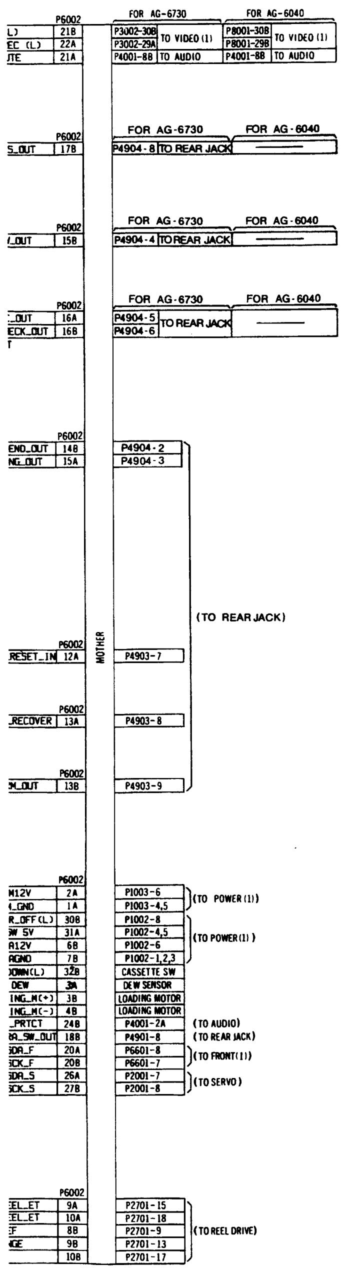


IC6002 MN1280-R
IC6003 MN1280-U


V1
V2
POWER VOLTAGE DET
OUTPUT CIRCUIT
3
2
1

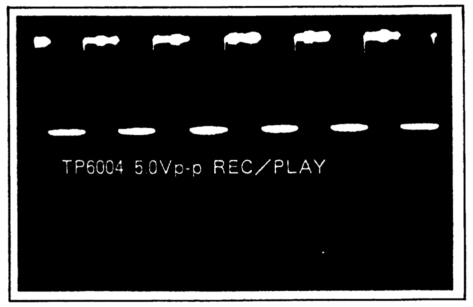
IC6010 M54649L


METER DETECT
MUTE CONTROL
AMP
COMP
AMP
AMP
MUTE
OUT1
DET1
IN1
GND
IN2
1
2
3
4
5
6


P6002
L)
EC (L)
JTE
21B
22A
21A
FOR AG-6730
P3002-30B
P3002-29A
TO VIDEO (1)
P4001-8B
TO AUDIO
FOR AG-6040
P8001-30B
P8001-29B
TO VIDEO (1)
P4001-8B
TO AUDIO
P6002
S_OUT
17B
FOR AG-6730
P4904-8
TO REAR JACK
FOR AG-6040
P6002
/_OUT
15B
FOR AG-6730
P4904-4
TO REAR JACK
FOR AG-6040
P6002
:_OUT
ECK_OUT
16A
16B
FOR AG-6730
P4904-5
P4904-6
TO REAR JACK
FOR AG-6040
P6002
END_OUT
NG_OUT
14B
15A
P4904-2
P4904-3
(TO REAR JACK)
MOTHER
P6002
RESET_IN
12A
P4903-7
P6002
RECOVER
13A
P4903-8
P6002
M_OUT
13B
P4903-9
P6002
M12V 2A P1003-6
_GND 1A P1003-4,5
(TO POWER (1))
R_OFF(L) 30B P1002-8
W 5V 31A P1002-4,5
A12V 6B P1002-6
AGND 7B P1002-1,2,3
(TO POWER (1))
DOWN(L) 32B CASSETTE SW
DEW 3A DEW SENSOR
ING_M(+) 3B LOADING MOTOR
ING_M(-) 4B LOADING MOTOR
_PRTCT 24B P4001-2A (TO AUDIO)
A_SW_OUT 18B P4901-8 (TO REAR JACK)
SDA_F 20A P6601-8
SCK_F 20B P6601-7
(TO FRONT(1))
SDA_S 26A P2001-7
SCK_S 27B P2001-8
(TO SERVO)
P6002
EL_ET 9A P2701-15
EL_ET 10A P2701-18
F 8B P2701-9
GE 9B P2701-13
10B P2701-17
(TO REEL DRIVE)

SYSTEM CONTROL TRs DC VOLTAGE CHART

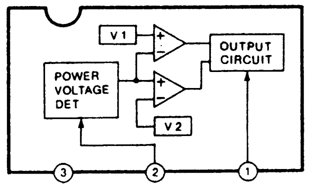
REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.6	11.8	0.7	11.1	0	11.6	11.6	0	11.1	0	0	0	0	0	0	0	5.3	0
REF. NO.	Q6007			Q6008														
MODE	E	C	B	E	C	B												
PLAY	0.6	0.6	1.3	0	9.7	0												
REF. NO.	QR2501			QR2502			QR2503			QR2504			QR2505			QR6001		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	12.0	0	0	0	5.0	0	12.0	0	0	0	5.0	0	0	5.0	5.3	0.8	4.4
REF. NO.	QR6002			QR6003			QR6004			QR6005			QR6006			QR6007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	11.6	0	5.3	11.7	5.5	11.8	11.7	0	0	0	5.1	0	11.7	0	0	1.0	0
REF. NO.	QR6008			QR6009			QR6205			QR6206			QR6207			QR6208		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	9.7	0	0	3.4	0	5.3	0	5.1	0	11.8	0	0	11.8	0	5.3	0	5.1
REF. NO.	QR6209			QR6210														
MODE	E	C	B	E	C	B												
PLAY	0	0.1	5.0	0	0	5.0												



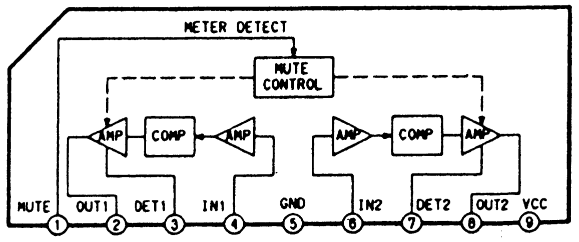
SYSTEM CONTROL ICs DC VOLTAGE CHART

REF. NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	2.7	2.7	2.7	12.1	2.5	2.5	2.3	5.0	0	0	0	0	0	0						
REF. NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	2.5	2.5	2.4	12.1	2.5	2.5	2.5	2.5	2.5	2.4	0	1.3	1.3	1.3						
REF. NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8												
PLAY	12.0	2.3	2.5	0	1.6	1.6	0	12.1												
REF. NO.	IC2505																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	2.5	2.5	2.3	2.3	2.5	0	0	0	12.0	0	12.0	2.5	2.5	0	2.5	12.1				
REF. NO.	IC2506																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	2.4	2.3	2.3	2.4	2.4	0	0	0	12.0	0	2.6	2.6	2.5	2.6	2.5	12.1				
REF. NO.	IC2507																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	1.7	0.1	0.8	0.6	0.9	0	0	0	0	0	12.0	0.4	0	0.4	0	12.1				
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	5.0	0	0	0	0	0	0	0	0	5.3	0	0	0	0	5.0	5.0	5.0	5.0	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.3
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	3.8	5.3	0	0	0	0	0	0.7	0.7	0.8	0	4.4	4.4	0	0	0	0	0	0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	0	0	2.4	2.4	2.7	5.0	2.5	2.7	0.6	3.9	5.1	5.1	5.0	5.0	5.1	0	5.1	0	0.1
REF. NO.	IC6001																			
MODE	81	82	83	84																
PLAY	5.1	0	0	4.4																
REF. NO.	IC6002										IC6003									
MODE	1	2	3								1	2	3							
PLAY	5.0	5.0	0								5.3	5.3	0							
REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8												
PLAY	0.1	5.1	1.3	0	0.4	3.3	0.1	5.3												
REF. NO.	IC6005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	5.3	5.3	0.3	5.3	0	0	5.3	0	3.9	5.3	3.0	3.0	2.3	2.3	0	5.3				
REF. NO.	IC6006																			
MODE	1	2	3	4	5	6	7	8												
PLAY	5.3	3.0	3.3	0	3.3	3.0	5.3	5.3												
REF. NO.	IC6007																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	0.6	0	4.0	4.0	0	0	0	0	0	5.0	0	3.5	3.5	0	5.3				
REF. NO.	IC6008																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	5.0	4.1	0	5.5	0	0	0	0	0	5.1	2.3	3.9	3.5	5.3						
REF. NO.	IC6009																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	5.3	0	0	0	0	5.3	0	5.3	0	0	3.0	5.3	5.3	0	5.3				
REF. NO.	IC6010																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	0	0.2	0.2	0	0	0	11.8	9.7	11.8	0.2										
REF. NO.	IC6011																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	3.9	3.9	3.9	11.7	1.0	1.0	1.0	2.5	2.5	2.5	0	0	0	11.0						

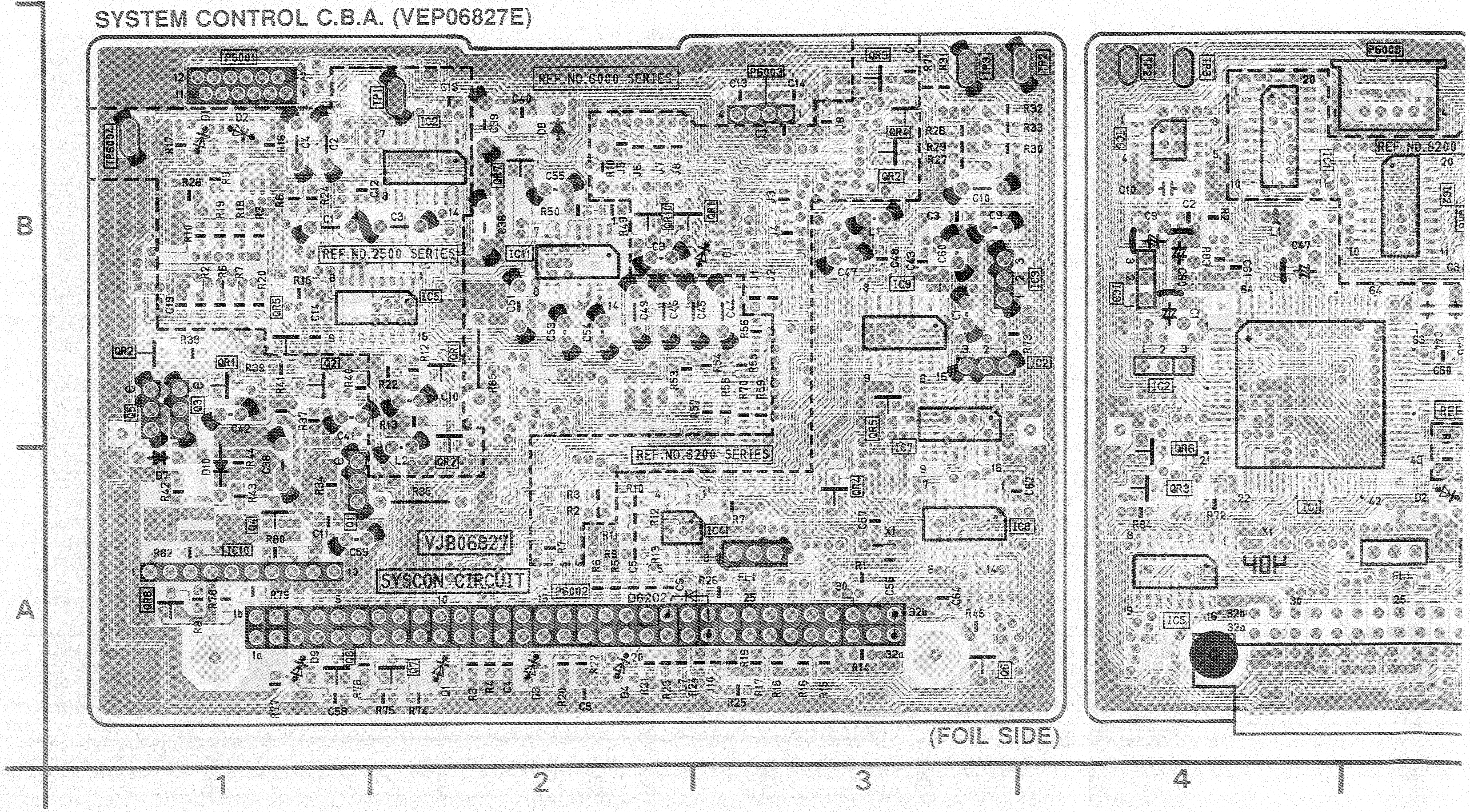
IC6002 MN1280-R
IC6003 MN1280-U

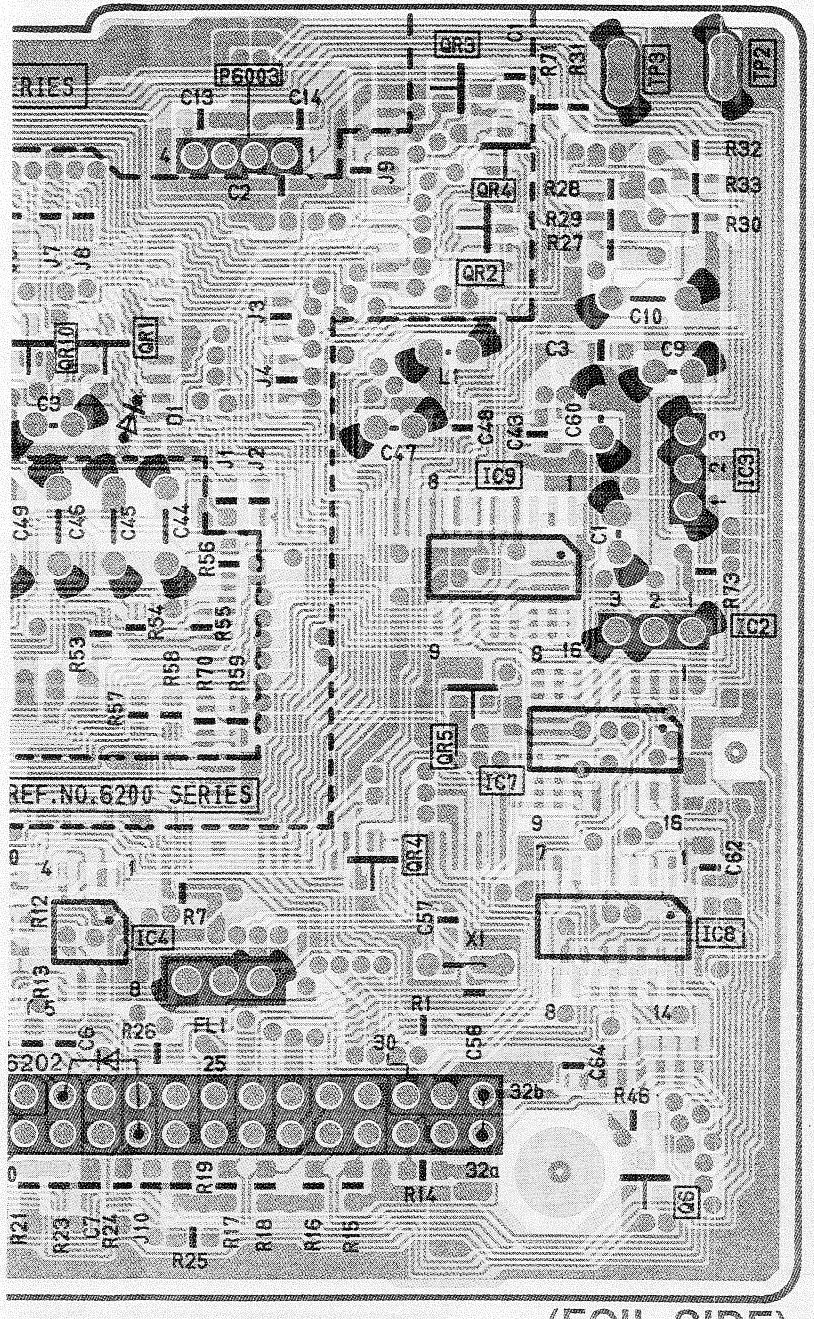

V 1
OUTPUT CIRCUIT
POWER VOLTAGE DET
V 2
③
②
①

IC6010 M54649L

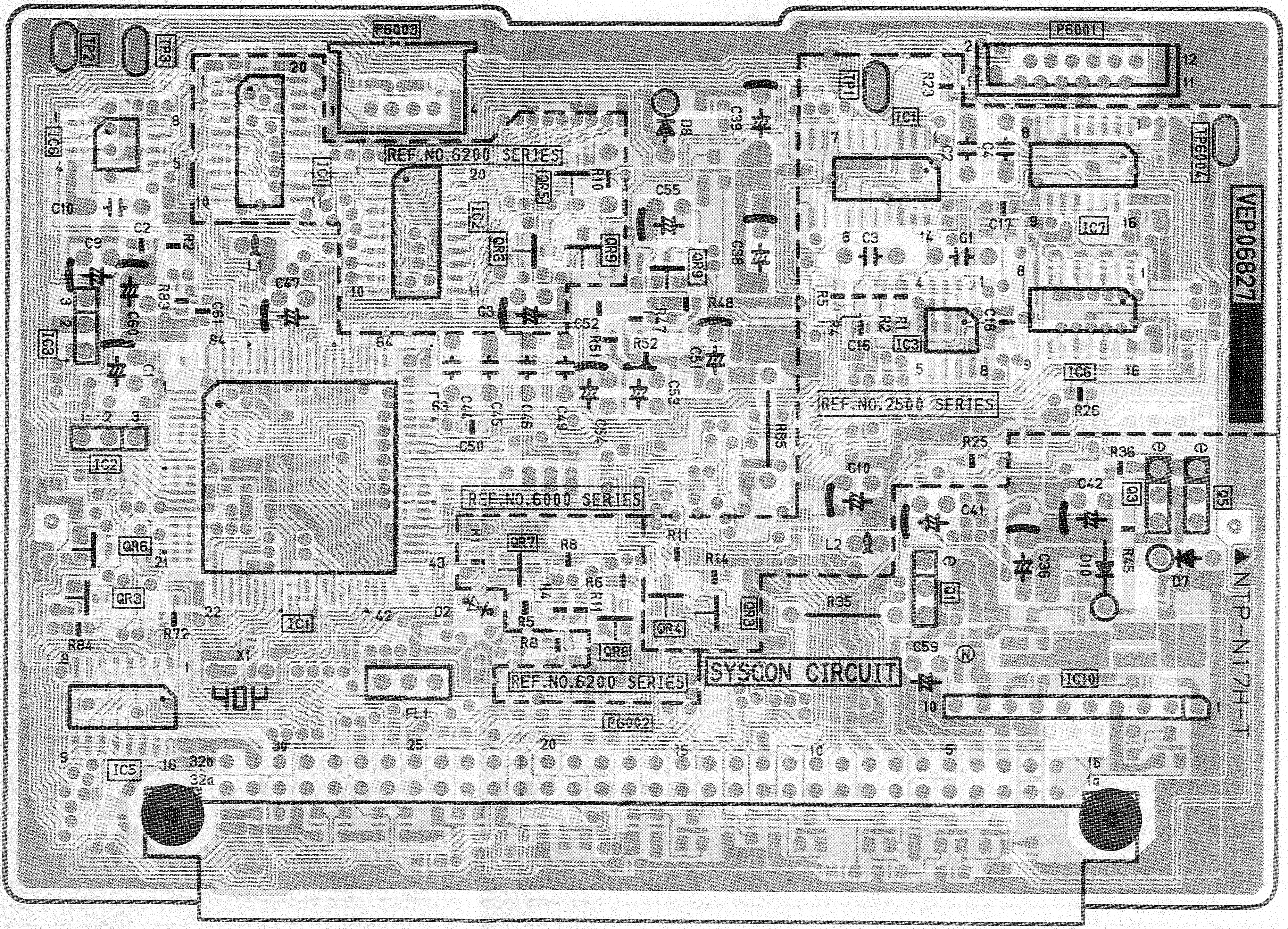

METER DETECT
MUTE CONTROL
AMP
COMP
AMP
AMP
COMP
AMP
MUTE
OUT1
DET1
IN1
GND
IN2
DET2
OUT2
VCC
①
②
③
④
⑤
⑥
⑦
⑧
⑨

SYSTEM CONTROL C.B.A. (VEP06827E)


SYSTEM CONTROL C.B.A. (VEP06827E)
REF.NO.6000 SERIES
REF.NO.2500 SERIES
REF.NO.6200 SERIES
REF.NO.6200
VJB06827
SYSCON CIRCUIT
P6001
P6002
P6003
TP5004
TP1
TP2
TP3
D6202
40P
(FOIL SIDE)
A
B
1
2
3
4


REF.NO.6200 SERIES
P6003
QR3
TP3
TP2
QR4
QR2
IC9
IC3
IC2
QR5
IC7
QR4
IC8
IC4
FL1
X1
32b
32a
Q6

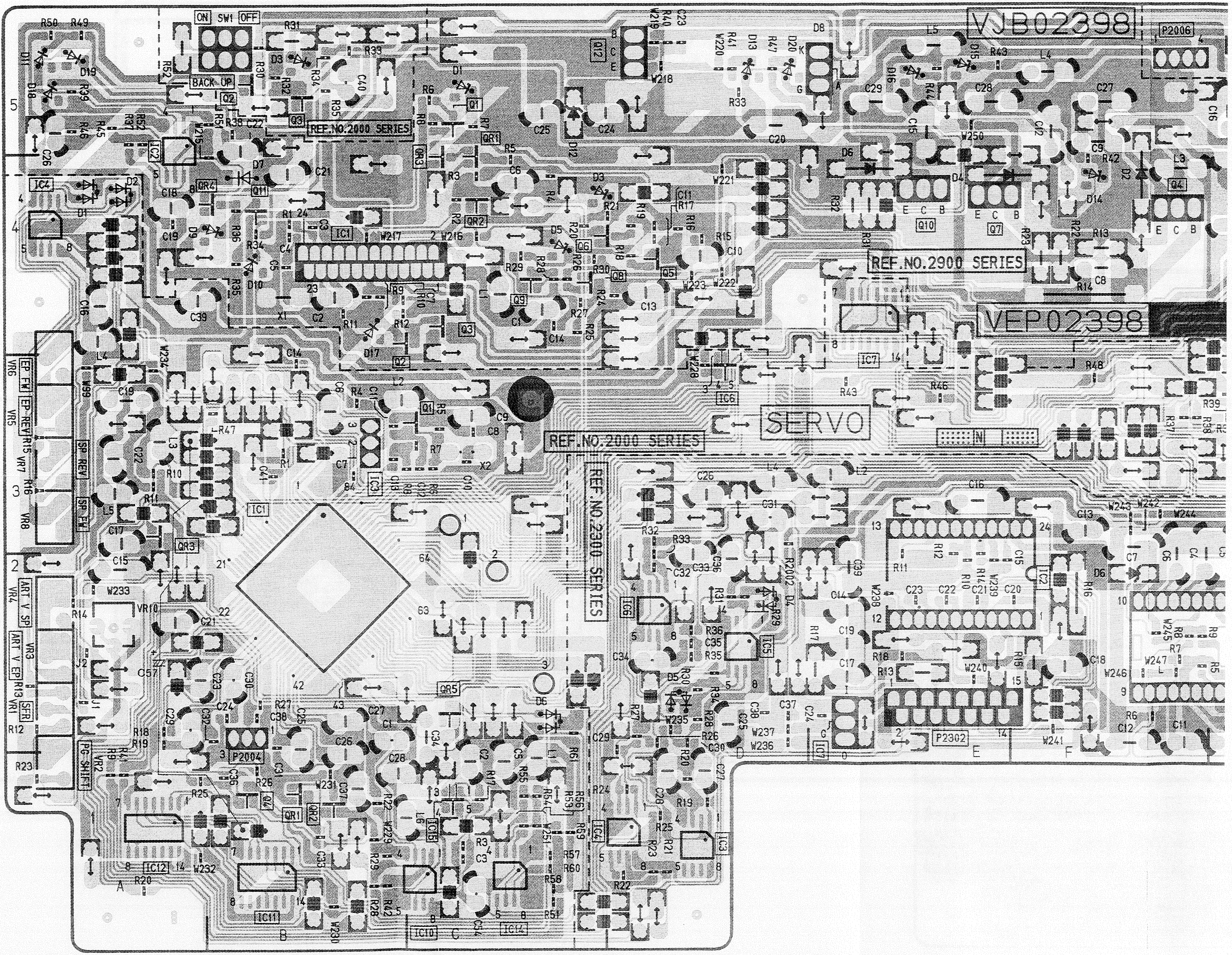
(FOIL SIDE)

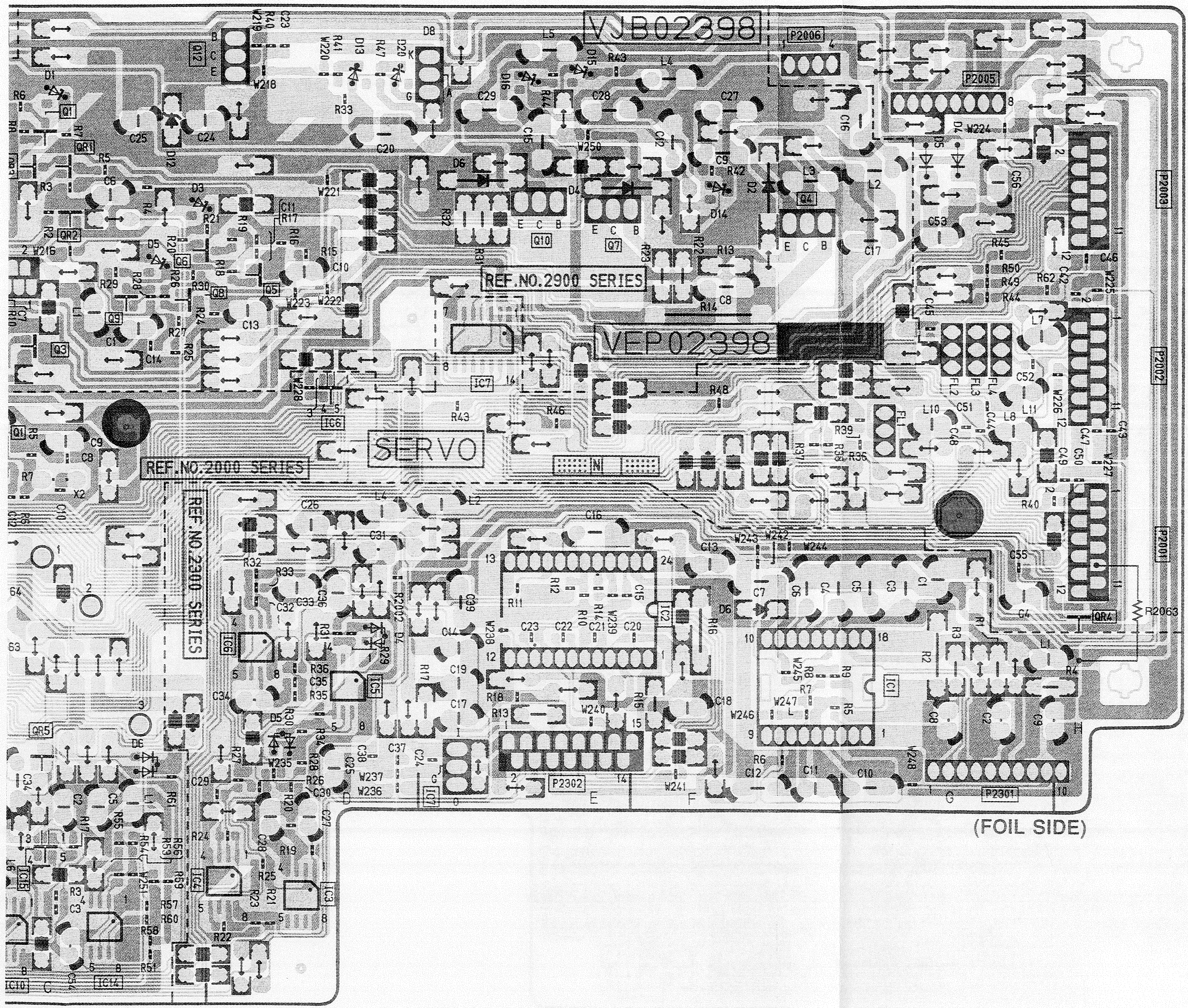

TP2
TP3
P6003
P6001
REF.NO.6200 SERIES
TP1
IC1
TP6004
VEP06827
IC6
IC2
IC7
IC3
IC6
REF.NO.2500 SERIES
REF.NO.6000 SERIES
QR6
QR3
QR7
QR4
QR8
IC1
IC4
40P
FL1
SYSCON CIRCUIT
REF.NO.6200 SERIES
P6002
IC10
IC5
NTP-N17H-T
32b
32a
1b
1a

(COMPONENT SIDE)

3 4 5 6

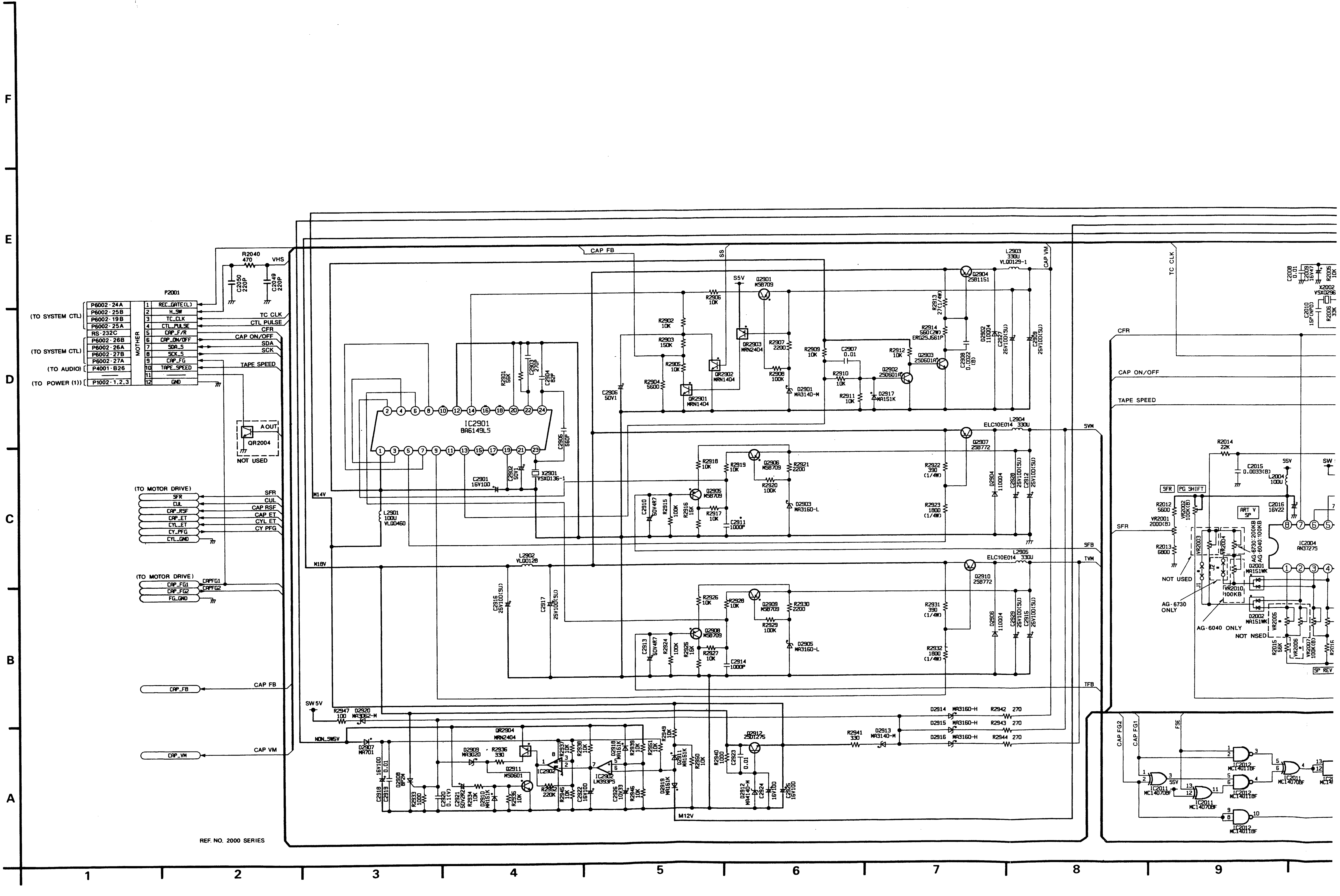
SERVO C.B.A. (VEP02398D)

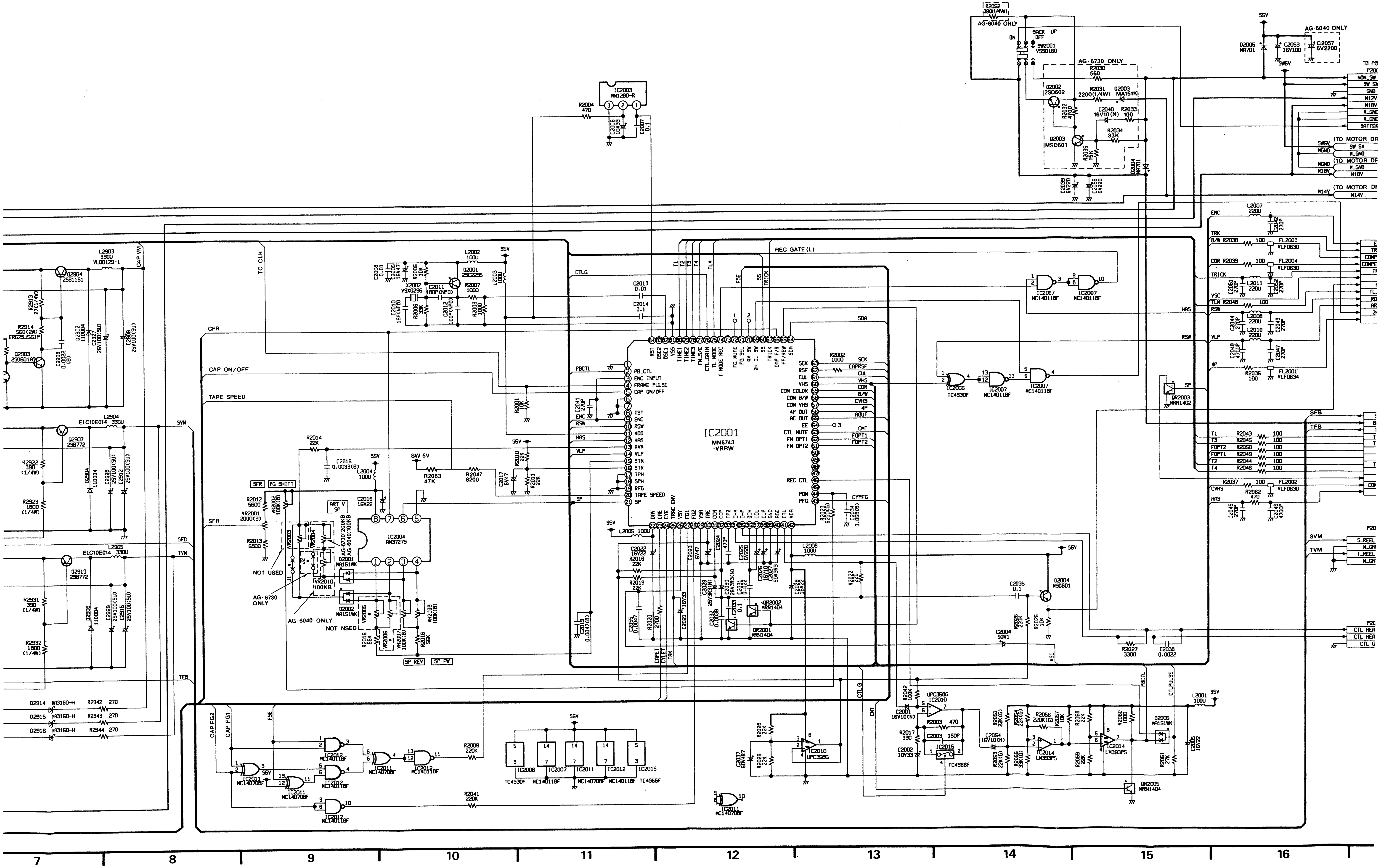

VJB02398
VEP02398
SERVO
REF.NO.2000 SERIES
REF.NO.2900 SERIES
REF.NO.2300 SERIES
ON SW1 OFF
BACK UP
P2006
P2004
P2302
EP FWD VR6
EP REV R15 VR5
SP REV VR7
SP FW VR8
ART V SP VR4
ART V EP VR3
SER VR1
PG SHIFT VR2
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC10
IC11
IC12
IC14
A
B
C
D
E
F
G
1
2
3
4
5

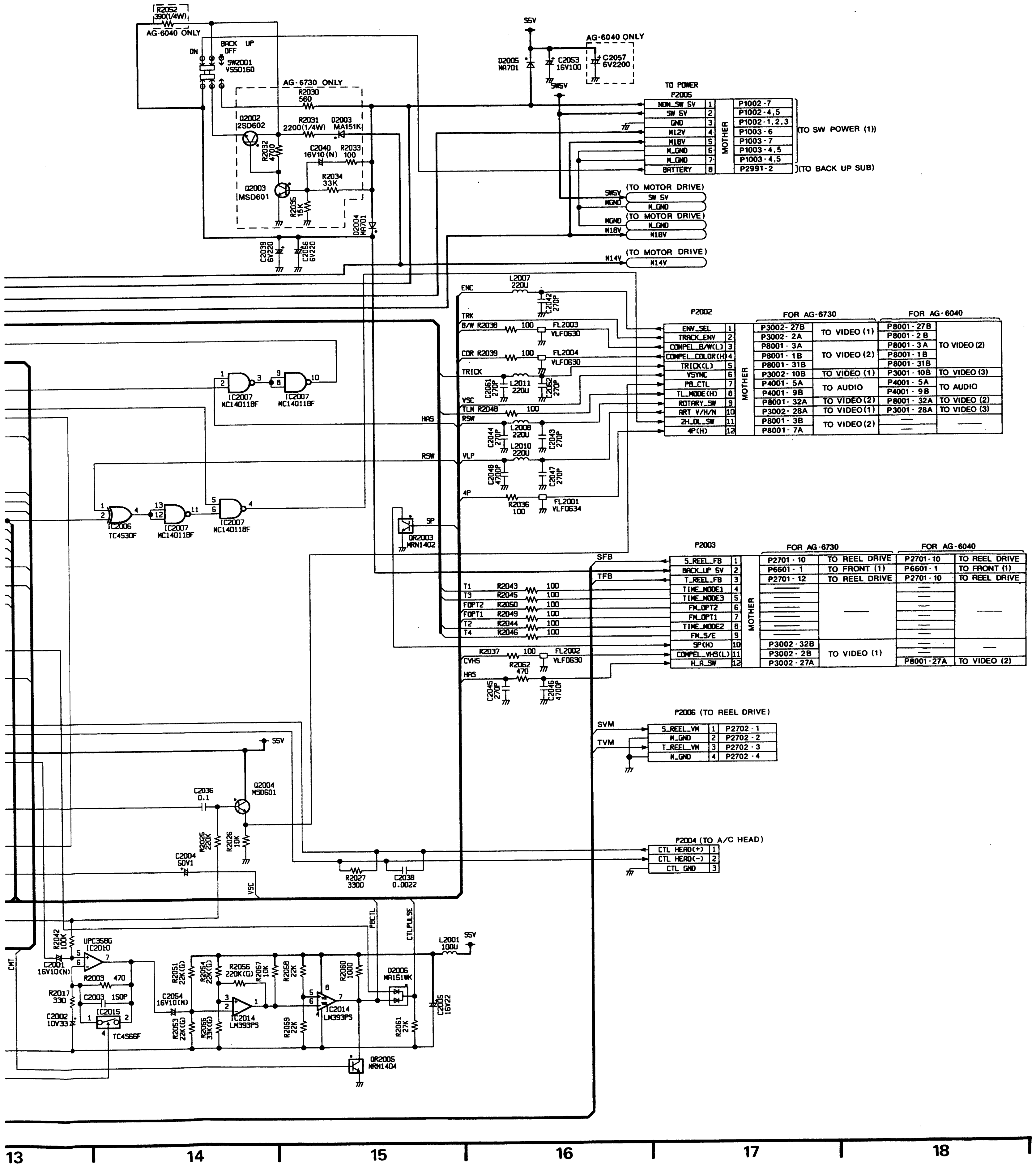

VJB02398
VEP02398
SERVO
REF.NO.2900 SERIES
REF.NO.2000 SERIES
REF.NO.2300 SERIES
P2006
P2005
P2003
P2002
P2001
P2302
P2301
IC1
IC2
IC3
IC4
IC5
IC6
IC7
QR4
R2063

(FOIL SIDE)

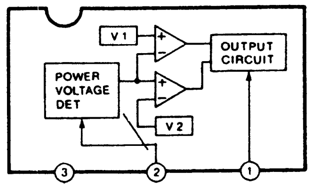
SERVO SCHEMATIC DIAGRAM


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
(TO SYSTEM CTL)
(TO SYSTEM CTL)
(TO AUDIO)
(TO POWER (1))
P2001
MOTHER
REC_GATE(L)
H_SW
TC_CLK
CTL_PULSE
CAP_F/R
CAP_ON/OFF
SDA_S
SCK_S
CAP_FG
TAPE_SPEED
GND
R2040 470
VHS
C2050 220P
C2049 220P
TC CLK
CTL PULSE
CFR
CAP ON/OFF
SDA
SCK
TAPE SPEED
A OUT
QR2004
NOT USED
(TO MOTOR DRIVE)
SFR
CUL
CAP RSF
CAP ET
CYL ET
CY PFG
CYL_GND
CAP_FG1
CAP_FG2
FG_GND
CAP_FB
CAP FB
CAP_VM
CAP VM
IC2901
BA6149LS
X2901 VSX0136-1
L2901 100U VL00460
L2902 VL00128
M14V
M18V
M12V
SW5V
NON_SW5V
S5V
SS
CAP VM
L2903 330U VL00129-1
Q2904 2SB1151
Q2907 2SB772
Q2910 2SB772
L2904 ELC10E014 330U
L2905 ELC10E014 330U
Q2901 MSB709
Q2902 2SD601A
Q2903 2SD601A
QR2901 MRN1404
QR2902 MRN1404
QR2903 MRN2404
QR2904 MRN2404
Q2905 MSB709
Q2906 MSB709
Q2908 MSB709
Q2909 MSB709
Q2911 MSD601
Q2912 2SD1275
IC2902 LM393PS
SVM
SFB
TVM
TFB
TC CLK
CFR
CAP ON/OFF
TAPE SPEED
SFR
PG SHIFT
IC2004 AN3727S
VR2001 2000(B)
VR2002 100K(B)
VR2003
VR2010 100KB
ART V SP
AG-6730 ONLY
AG-6040 ONLY
NOT USED
NOT NSED
SP REV
IC2011 MC14070BF
IC2012 MC14011BF
CAP FG2
CAP FG1
FSE
REF. NO. 2000 SERIES

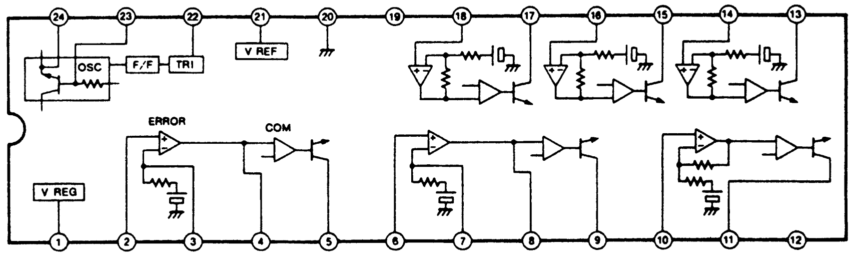

IC2001
MN6743
-VRRW
IC2003
MN1280-R
IC2004
AN37275
IC2006
TC4530F
IC2007
MC14011BF
IC2011
MC14070BF
IC2012
MC14011BF
IC2015
TC4566F
IC2010
UPC358G
IC2014
LM393PS
REC GATE (L)
CTLG
CFR
CAP ON/OFF
TAPE SPEED
SFR
TC CLK
CAP VM
SVM
SFB
TVM
TFB
CAP FG2
CAP FG1
FSE
PBCTL
ENC
RSW
HAS
VLP
SP
SDA
SCK
CAPRSF
CUL
VHS
COR
B/W
CVHS
4P
AOUT
CMT
FOPT1
FOPT2
CYPFG
CTL G
CTL PULSE
VSC
NOT USED
AG-6730 ONLY
AG-6040 ONLY
NOT NSED
SP REV
SP FW
SFR
FG SHIFT
ART V SP
5SV
SW 5V
AG-6040 ONLY
AG-6730 ONLY
BACK UP
ON
OFF
SW2001
VSS0160
Q2002
2SD602
Q2003
MSD601
Q2004
MSD601
Q2001
2SC2295
Q2904
2SB1151
Q2903
2SD601A
Q2907
2SB772
Q2910
2SB772
D2914
D2915
D2916
MA3160-H
TO MOTOR DR
NON_SW
SW 5V
GND
M12V
M18V
M_GND
BATTERY
SW5V
MGND
N18V
N14V
S_REEL
T_REEL
CTL HEAD
CTL G
ENC
TRK
TRICK
VSC
TLM
T1
T3
T2
T4
FL2001
YLF0634
FL2002
FL2003
FL2004
YLF0630
QR2001
QR2002
QR2003
QR2005
MRN1404
MRN1402
D2001
D2002
D2006
MA151WK
7
8
9
10
11
12
13
14
15
16


R2052 390(1/4W)
AG-6040 ONLY
BACK UP
ON
OFF
SW2001 VSS0160
AG-6730 ONLY
R2030 560
Q2002 2SD602
R2031 2200(1/4W)
D2003 MA151K
R2032 4700
C2040 16V10(N)
R2033 100
R2034 33K
Q2003 MSD601
R2035 15K
D2004 MA701
C2039 6V220
C2056 6V220
5SV
D2005 MA701
C2053 16V100
AG-6040 ONLY
C2057 6V2200
SW5V
TO POWER
P2005
NON_SW 5V 1 P1002-7
SW 5V 2 P1002-4,5
GND 3 P1002-1,2,3
M12V 4 P1003-6
M18V 5 P1003-7
M_GND 6 P1003-4,5
M_GND 7 P1003-4,5
BATTERY 8 P2991-2
MOTHER
(TO SW POWER (1))
(TO BACK UP SUB)
(TO MOTOR DRIVE)
SW5V SW 5V
MGND M_GND
(TO MOTOR DRIVE)
MGND M_GND
M18V M18V
(TO MOTOR DRIVE)
M14V M14V
ENC
L2007 220U
C2042 270P
TRK
B/W R2038 100
FL2003 VLF0630
COR R2039 100
FL2004 VLF0630
TRICK
C2061 270P
L2011 220U
C2052 270P
VSC
TLM R2048 100
RSW
C2044 270P
L2008 220U
C2043 270P
L2010 220U
VLP
C2048 4700P
C2047 270P
4P
R2036 100
FL2001 VLF0634
HAS
RSW
SP
QR2003 MRN1402
P2002
FOR AG-6730
FOR AG-6040
ENV_SEL 1 P3002-27B TO VIDEO (1) P8001-27B TO VIDEO (2)
TRACK_ENV 2 P3002-2A P8001-2B
COMPEL_B/W(L) 3 P8001-3A TO VIDEO (2) P8001-3A
COMPEL_COLOR(H) 4 P8001-1B P8001-1B
TRICK(L) 5 P8001-31B P8001-31B
VSYNC 6 P3002-10B TO VIDEO (1) P3001-10B TO VIDEO (3)
PB_CTL 7 P4001-5A TO AUDIO P4001-5A TO AUDIO
TL_MODE(H) 8 P4001-9B P4001-9B
ROTARY_SW 9 P8001-32A TO VIDEO (2) P8001-32A TO VIDEO (2)
ART V/H/N 10 P3002-28A TO VIDEO (1) P3001-28A TO VIDEO (3)
2H_DL_SW 11 P8001-3B TO VIDEO (2) —
4P(H) 12 P8001-7A —
MOTHER
1 2 3 IC2007 MC14011BF
9 8 10 IC2007 MC14011BF
1 2 4 IC2006 TC4S30F
13 12 11 IC2007 MC14011BF
5 6 4 IC2007 MC14011BF
SFB
TFB
T1 R2043 100
T3 R2045 100
FOPT2 R2050 100
FOPT1 R2049 100
T2 R2044 100
T4 R2046 100
R2037 100
FL2002 VLF0630
CVHS R2062 470
HAS
C2045 270P
C2046 4700P
P2003
FOR AG-6730
FOR AG-6040
S_REEL_FB 1 P2701-10 TO REEL DRIVE P2701-10 TO REEL DRIVE
BACK_UP 5V 2 P6601-1 TO FRONT (1) P6601-1 TO FRONT (1)
T_REEL_FB 3 P2701-12 TO REEL DRIVE P2701-10 TO REEL DRIVE
TIME_MODE1 4 —
TIME_MODE3 5 —
FM_OPT2 6 —
FM_OPT1 7 —
TIME_MODE2 8 —
FM_S/E 9 —
SP(H) 10 P3002-32B TO VIDEO (1) —
COMPEL_VHS(L) 11 P3002-2B —
H_A_SW 12 P3002-27A P8001-27A TO VIDEO (2)
MOTHER
P2006 (TO REEL DRIVE)
SVM
TVM
S_REEL_VM 1 P2702-1
M_GND 2 P2702-2
T_REEL_VM 3 P2702-3
M_GND 4 P2702-4
5SV
Q2004 MSD601
C2036 0.1
R2025 220K
R2026 10K
C2004 50V1
VSC
P2004 (TO A/C HEAD)
CTL HEAD(+) 1
CTL HEAD(-) 2
CTL GND 3
R2027 3300
C2038 0.0022
PBCTL
CTLPULSE
L2001 100U
5SV
CMT
R2042 100K
UPC358G IC2010
C2001 16V10(N)
R2003 470
R2017 330
C2003 150P
C2002 10V33
IC2015 TC4S66F
R2051 22K(G)
R2054 22K(G)
R2056 220K(G)
R2057 10K
C2054 16V10(N)
IC2014 LM393PS
R2053 22K(G)
R2055 33K(G)
R2058 22K
R2059 22K
R2060 1000
IC2014 LM393PS
D2006 MA151WK
R2061 27K
C2055 16V22
QR2005 MRN1404
13
14
15
16
17
18

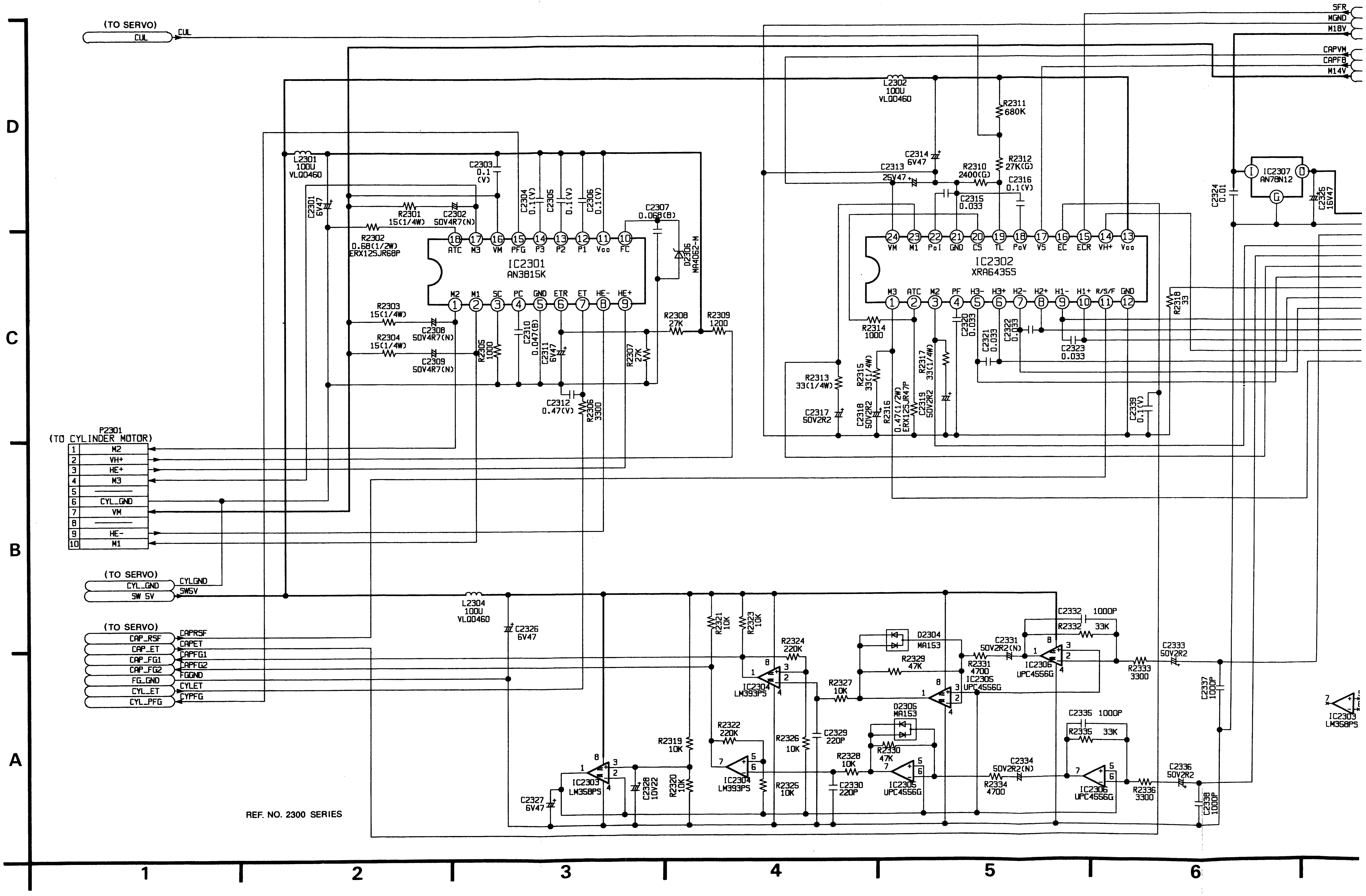
IC2003 MN1280-R

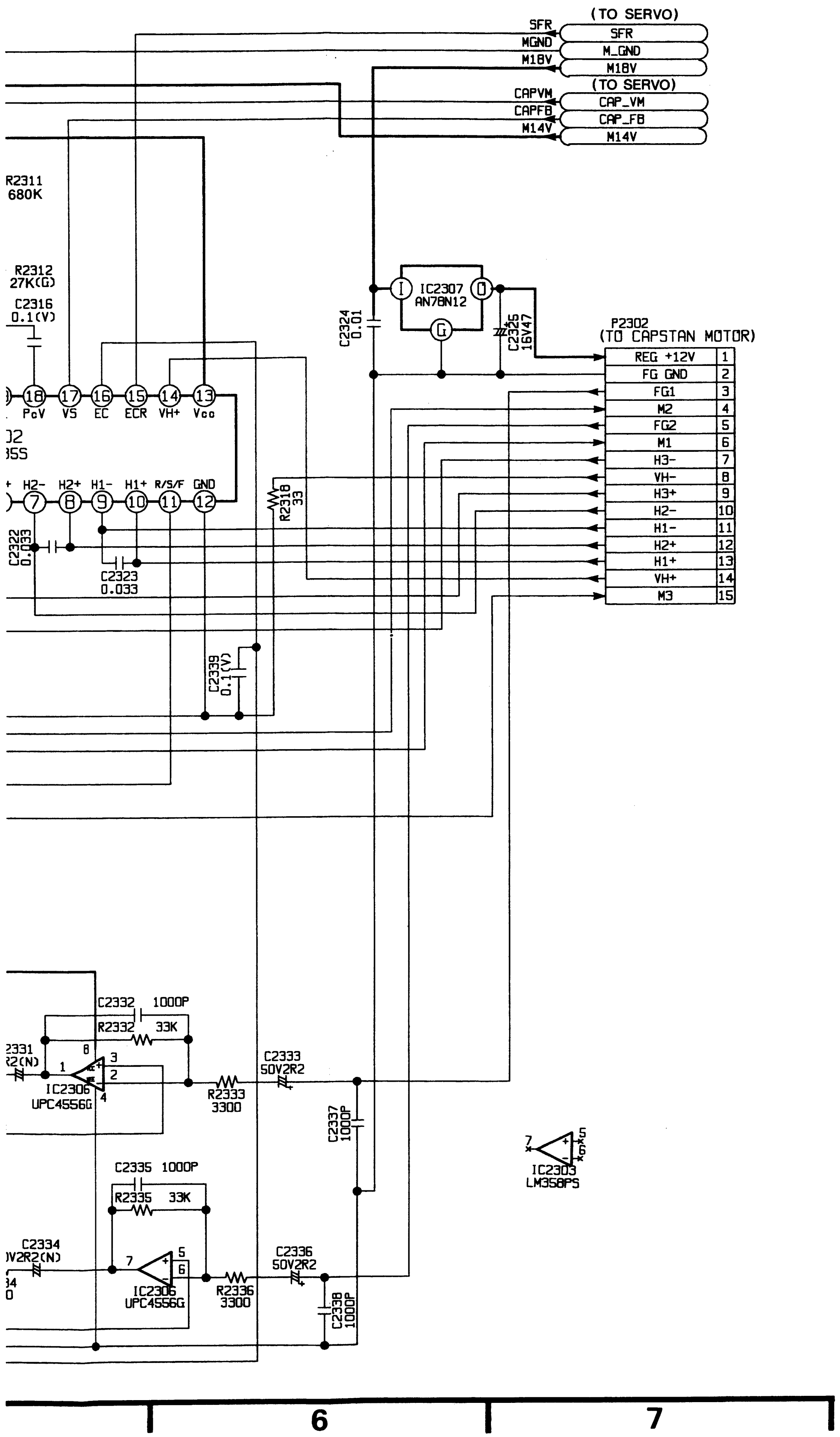

V1
OUTPUT CIRCUIT
POWER VOLTAGE DET
V2
③
②
①

IC2901 BA6149LS

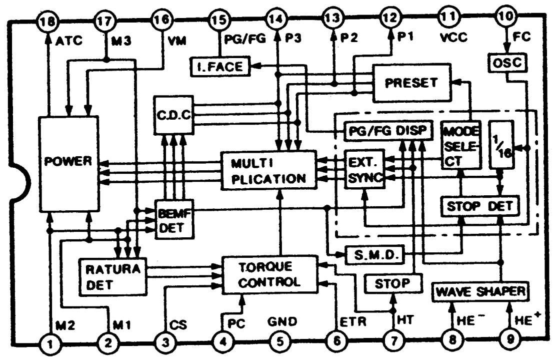

㉔ ㉓ ㉒ ㉑ ⑳ ⑲ ⑱ ⑰ ⑯ ⑮ ⑭ ⑬
OSC
F/F
TRI
V REF
ERROR
COM
V REG
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

MOTOR DRIVE SECTION SCHEMATIC DIAGRAM

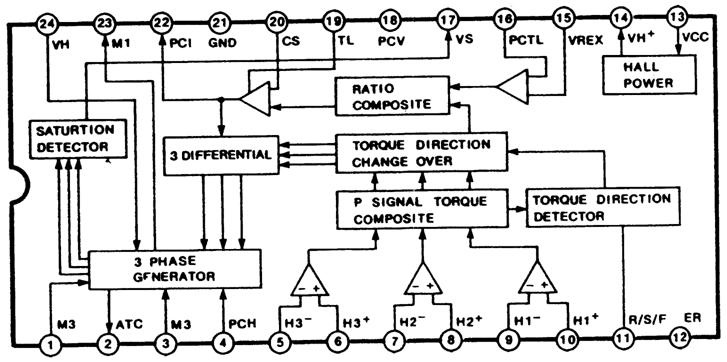

D
C
B
A
1
2
3
4
5
6
(TO SERVO)
CUL
SFR
MGND
M18V
CAPVM
CAPFG
M14V
L2301
100U
VL00460
C2301
6V47
R2301
15(1/4W)
C2302
50V4R7(N)
R2302
0.68(1/2W)
ERX12SJR68P
C2303
0.1
(V)
C2304
0.1(V)
C2305
C2306
0.1(V)
C2307
0.068(B)
D2306
MA4062-M
IC2301
AN3815K
ATC M3 VM PFG P3 P2 P1 Vcc FC
M2 M1 SC PC GND ETR ET HE- HE+
R2303
15(1/4W)
C2308
50V4R7(N)
R2304
15(1/4W)
C2309
50V4R7(N)
R2305
1000
C2310
0.047(B)
C2311
6V47
R2307
27K
R2308
27K
R2309
1200
C2312
0.47(V)
R2306
3300
P2301
(TO CYLINDER MOTOR)
1 M2
2 VH+
3 HE+
4 M3
5
6 CYL_GND
7 VM
8
9 HE-
10 M1
CYL_GND
CYLGND
SW 5V
SW5V
CAP_RSF
CAPRSF
CAP_ET
CAPET
CAP_FG1
CAPFG1
CAP_FG2
CAPFG2
FG_GND
FGGND
CYL_ET
CYLET
CYL_PFG
CYPFG
L2304
100U
VL00460
C2326
6V47
C2327
6V47
IC2303
LM358PS
C2328
10V22
R2319
10K
R2320
10K
R2321
10K
R2323
10K
R2322
220K
R2324
220K
IC2304
LM393PS
R2325
10K
R2326
10K
C2329
220P
C2330
220P
R2327
10K
R2328
10K
R2329
47K
R2330
47K
D2304
MA153
D2305
MA153
IC2305
UPC4556G
R2331
4700
C2331
50V2R2(N)
C2332 1000P
R2332 33K
IC2306
UPC4556G
R2333
3300
C2333
50V2R2
C2334
50V2R2(N)
R2334
4700
C2335 1000P
R2335 33K
R2336
3300
C2336
50V2R2
C2337
1000P
C2338
1000P
REF. NO. 2300 SERIES
L2302
100U
VL00460
R2311
680K
R2312
27K(G)
C2314
6V47
C2313
25V47
R2310
2400(G)
C2316
0.1(V)
C2315
0.033
IC2302
XRA6435S
VM M1 PoI GND CS TL PoV VS EC ECR VH+ Vcc
M3 ATC M2 PF H3- H3+ H2- H2+ H1- H1+ R/S/F GND
R2314
1000
R2313
33(1/4W)
C2317
50V2R2
R2315
33(1/4W)
C2318
50V2R2
R2316
0.47(1/2W)
ERX12SJR47P
C2319
50V2R2
R2317
33(1/4W)
C2320
0.033
C2321
0.033
C2322
0.1
C2323
0.033
C2339
0.1(V)
R2318
33
C2324
0.01
IC2307
AN78N12
I O G
C2325
16V47
IC2303
LM358PS


(TO SERVO)
SFR
MGND
M18V
SFR
M_GND
M18V
(TO SERVO)
CAPVM
CAPFB
M14V
CAP_VM
CAP_FB
M14V
R2311
680K
R2312
27K(G)
C2316
0.1(V)
IC2307
AN78N12
C2324
0.01
C2325
16V47
P2302
(TO CAPSTAN MOTOR)
REG +12V
FG GND
FG1
M2
FG2
M1
H3-
VH-
H3+
H2-
H1-
H2+
H1+
VH+
M3
PoV
VS
EC
ECR
VH+
Vcc
H2-
H2+
H1-
H1+
R/S/F
GND
R2318
33
C2322
0.033
C2323
0.033
C2339
0.1(V)
C2332 1000P
R2332 33K
C2333
50V2R2
R2333
3300
IC2306
UPC4556G
C2337
1000P
IC2303
LM358PS
C2335 1000P
R2335 33K
C2334
C2336
50V2R2
R2336
3300
C2338
1000P
6
7

IC2301 AN3815K


ATC
M3
VM
PG/FG
P3
P2
P1
VCC
FC
I.FACE
PRESET
OSC
C.D.C
PG/FG DISP
MODE SELECT
1/16
POWER
MULTI PLICATION
EXT. SYNC
STOP DET
BEMF DET
S.M.D.
RATURA DET
TORQUE CONTROL
STOP
WAVE SHAPER
M2
M1
CS
PC
GND
ETR
HT
HE-
HE+

IC2302 XRA6435S


VH
M1
PCI
GND
CS
TL
PCV
VS
PCTL
VREX
VH+
VCC
HALL POWER
RATIO COMPOSITE
SATURTION DETECTOR
3 DIFFERENTIAL
TORQUE DIRECTION CHANGE OVER
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
3 PHASE GENERATOR
M3
ATC
M3
PCH
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
ER

SERVO ICs DC VOLTAGE CHART

REF. NO.	IC2001																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PLAY	0	0	4.9	0	5.0	0	0	0	0	4.0	5.0	0	0	0	0	0	0	0	0
REF. NO.	IC2001																		
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
PLAY	0	5.0	0	2.5	2.5	2.5	0	2.5	0	2.5	2.7	0	4.9	0	0	0	2.5	0	0
REF. NO.	IC2001																		
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
PLAY	2.6	5.0	0	3.3	4.6	0	0	0	0	0	0	5.0	0	0	5.0	0	0	5.0	0
REF. NO.	IC2001																		
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
PLAY	4.9	0	4.9	0	5.0	0	5.0	0	0	0	5.0	0	0	0	0	5.0	5.0	0	0
REF. NO.	IC2001																		
MODE	81	82	83	84															
PLAY	0	2.1	2.2	0															
REF. NO.	IC2003										IC2004								
MODE	1	2	3								1	2	3	4	5	6	7	8	
PLAY	5.0	5.0	0								0.4	0.4	2.6	5.0	0	0	0	0	
REF. NO.	IC2006																		
MODE	1	2	3	4	5														
PLAY	3.6	0	0	5.0	5.0														
REF. NO.	IC2007																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14					
PLAY	0	0	5.0	5.0	0	0	0	5.0	0	0	0	0	0	5.0					
REF. NO.	IC2010																		
MODE	1	2	3	4	5	6	7	8											
PLAY	2.5	0	2.5	0	0	2.5	2.5	5.0											
REF. NO.	IC2011																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14					
PLAY	0	2.5	0	0	2.6	0	0	1.9	1.9	0	0	5.0	5.0	5.0					
REF. NO.	IC2012																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14					
PLAY	5.0	2.6	2.5	5.0	2.5	0	0	2.5	2.5	0	2.5	2.5	2.5	5.0					
REF. NO.	IC2014										IC2015								
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5				
PLAY	4.9	2.5	0	0	2.5	4.7	0.2	5.0			0	2.5	0	5.0	5.0				
REF. NO.	IC2301																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
PLAY	13.7	12.6	0.4	1.1	0	2.6	2.5	0.7	0.6	2.7	5.1	3.8	3.7	3.7	1.5	13.4	0	0	
REF. NO.	IC2302																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PLAY	1.6	0	1.9	1.4	2.1	2.1	2.1	2.1	2.1	2.1	0	0	5.1	3.8	2.8	2.6	2.6	0.6	0.4
REF. NO.	IC2302																		
MODE	21	22	23	24															
PLAY	0	0.7	1.8	9.7															
REF. NO.	IC2303										IC2304								
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
PLAY	0	2.6	2.6	0	0	0	0	0			0	2.5	2.5	0	0	0	2.6	5.2	
REF. NO.	IC2305										IC2306								
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
PLAY	0	0	0	0	0	0	0	0			2.6	0	2.6	0	2.6	2.6	0	5.2	
REF. NO.	IC2307																		
MODE	I	G	O																
PLAY	19.2	0	11.9																
REF. NO.	IC2901																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PLAY	13.4	2.9	3.0	3.2	17.7	2.8	2.9	2.9	16.7	2.0	2.0	0	1.6	2.6	0.5	1.4	0.5	1.2	0
REF. NO.	IC2901																		
MODE	21	22	23	24															
PLAY	2.5	2.5	—	2.7															
REF. NO.	IC2902																		
MODE	1	2	3	4	5	6	7	8											
PLAY	0	5.1	2.7	0	2.6	0	0	0											

SERVO ICs DC VOLTAGE CHART

REF. NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	4.9	0	5.0	0	0	0	0	4.0	5.0	0	0	0	0	0	0	0	0	0
REF. NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	5.0	0	2.5	2.5	2.5	0	2.5	0	2.5	2.7	0	4.9	0	0	0	2.5	0	0	3.1
REF. NO.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.6	5.0	0	3.3	4.6	0	0	0	0	0	0	5.0	0	0	5.0	0	0	5.0	0	4.2
REF. NO.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	4.9	0	4.9	0	5.0	0	5.0	0	0	0	5.0	0	0	0	0	5.0	5.0	0	0	0
REF. NO.	IC2001																			
MODE	81	82	83	84																
PLAY	0	2.1	2.2	0																
REF. NO.	IC2003										IC2004									
MODE	1	2	3								1	2	3	4	5	6	7	8		
PLAY	5.0	5.0	0								0.4	0.4	2.6	5.0	0	0	0	0		
REF. NO.	IC2006																			
MODE	1	2	3	4	5															
PLAY	3.6	0	0	5.0	5.0															
REF. NO.	IC2007																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	0	0	5.0	5.0	0	0	0	5.0	0	0	0	0	0	5.0						
REF. NO.	IC2010																			
MODE	1	2	3	4	5	6	7	8												
PLAY	2.5	0	2.5	0	0	2.5	2.5	5.0												
REF. NO.	IC2011																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	0	2.5	0	0	2.6	0	0	1.9	1.9	0	0	5.0	5.0	5.0						
REF. NO.	IC2012																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	5.0	2.6	2.5	5.0	2.5	0	0	2.5	2.5	0	2.5	2.5	2.5	5.0						
REF. NO.	IC2014										IC2015									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5					
PLAY	4.9	2.5	0	0	2.5	4.7	0.2	5.0			0	2.5	0	5.0	5.0					
REF. NO.	IC2301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
PLAY	13.7	12.6	0.4	1.1	0	2.6	2.5	0.7	0.6	2.7	5.1	3.8	3.7	3.7	1.5	13.4	0	0		
REF. NO.	IC2302																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.6	0	1.9	1.4	2.1	2.1	2.1	2.1	2.1	2.1	0	0	5.1	3.8	2.8	2.6	2.6	0.6	0.4	0
REF. NO.	IC2302																			
MODE	21	22	23	24																
PLAY	0	0.7	1.8	9.7																
REF. NO.	IC2303										IC2304									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
PLAY	0	2.6	2.6	0	0	0	0	0			0	2.5	2.5	0	0	0	2.6	5.2		
REF. NO.	IC2305										IC2306									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
PLAY	0	0	0	0	0	0	0	0			2.6	0	2.6	0	2.6	2.6	0	5.2		
REF. NO.	IC2307																			
MODE	I	G	O																	
PLAY	19.2	0	11.9																	
REF. NO.	IC2901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	13.4	2.9	3.0	3.2	17.7	2.8	2.9	2.9	16.7	2.0	2.0	0	1.6	2.6	0.5	1.4	0.5	1.2	0	0
REF. NO.	IC2901																			
MODE	21	22	23	24																
PLAY	2.5	2.5	—	2.7																
REF. NO.	IC2902																			
MODE	1	2	3	4	5	6	7	8												
PLAY	0	5.1	2.7	0	2.6	0	0	0												

SERVO TRs DC VOLTAGE CHART

REF. NO.	Q2001			Q2004			Q2901			Q2902			Q2903			Q2904		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	3.2	5.0	3.7	1.8	0	2.3	9.6	2.6	9.5	0	0.3	0.3	0	10.5	0.3	19.2	9.7	18.9
REF. NO.	Q2905			Q2906			Q2907			Q2908			Q2909			Q2910		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.9	2.9	2.3	0	5.3	0	19.2	5.1	19.0	3.6	2.8	2.9	5.5	0	5.5	19.2	5.5	18.9
REF. NO.	Q2911			Q2912														
MODE	E	C	B	E	C	B												
PLAY	0	0.1	0	13.4	19.2	14.5												
REF. NO.	QR2001			QR2002			QR2003			QR2005			QR2901			QR2902		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	3.2	5.0	3.7	0	0	5.0	0	0.9	0	0	0.3	0	0	2.6	0	0	0	0
REF. NO.	QR2903			QR2904														
MODE	E	C	B	E	C	B												
PLAY	5.0	0	9.7	5.3	0.1	4.5												

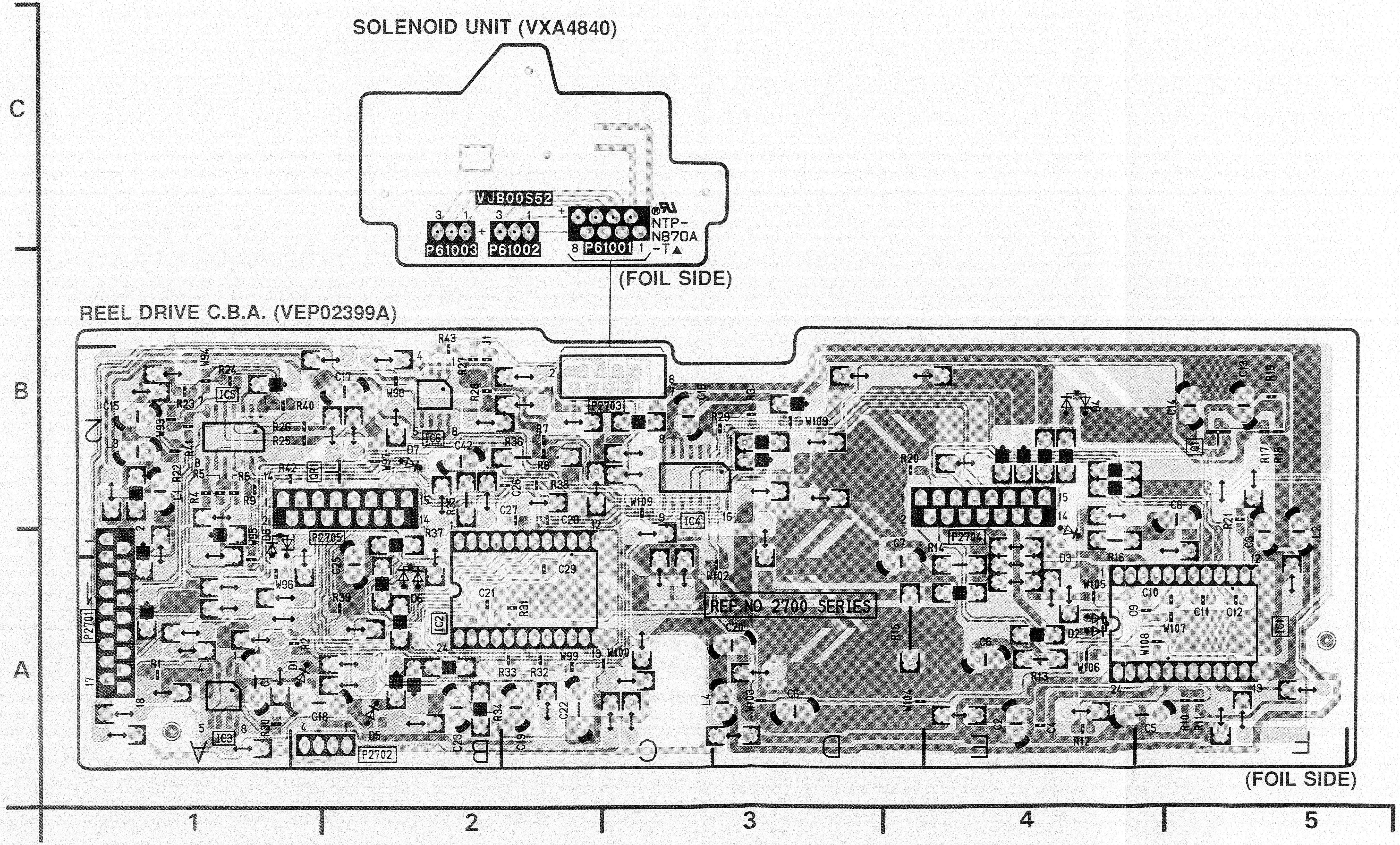
REEL DRIVE ICs DC VOLTAGE CHART

REF. NO.	IC2701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0.9	0.1	0.6	1.4	2.7	2.8	2.9	2.7	2.8	2.7	0	0	5.1	3.8	2.5	2.3	4.5	0.6	0.8	0.1
REF. NO.	IC2701																			
MODE	21	22	23	24																
PLAY	0	0.7	1.0	5.0																
REF. NO.	IC2702																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.7	0.1	3.6	1.3	2.8	2.9	2.8	2.8	2.9	2.8	0	0	5.1	3.8	2.8	2.4	4.4	0.7	0.6	0.1
REF. NO.	IC2702																			
MODE	21	22	23	24																
PLAY	0	0.7	3.3	5.8																
REF. NO.	IC2703																			
MODE	1	2	3	4	5	6	7	8												
PLAY	3.9	0.1	0.1	0	0.1	0.1	3.1	5.2												
REF. NO.	IC2704																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	2.7	0	1.9	1.7	1.1	0	0	0	0	5.2	0.1	2.5	3.4	2.5	2.7	5.2				
REF. NO.	IC2705																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PLAY	5.1	5.1	5.2	2.3	2.4	2.4	2.3	3.1	2.5	2.0	2.5	0	5.2	0.1						
REF. NO.	IC2706																			
MODE	1	2	3	4	5	6	7	8												
PLAY	5.0	5.0	5.0	0	2.5	2.5	2.5	12.1												

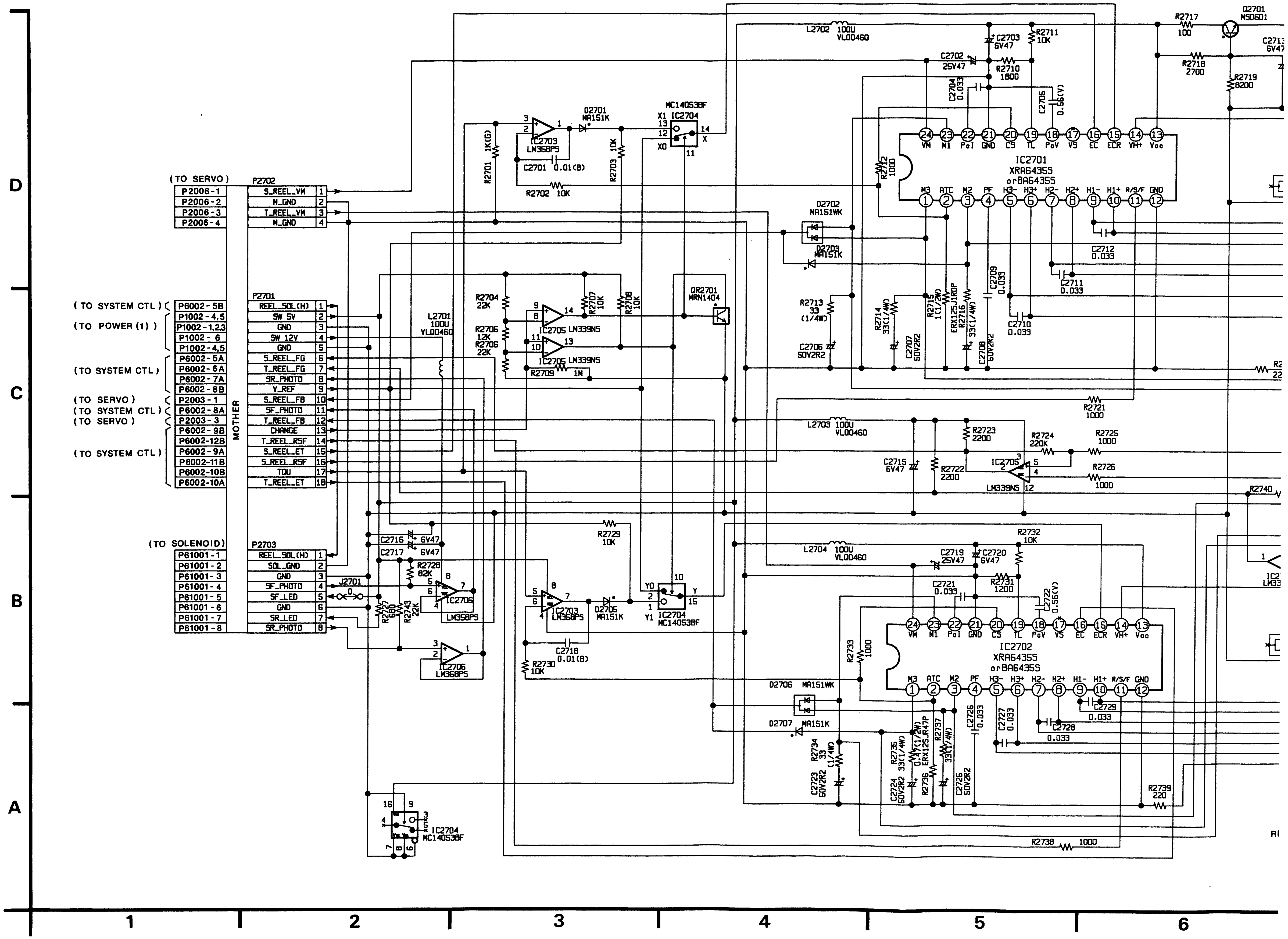
REEL DRIVE TRs DC VOLTAGE CHART

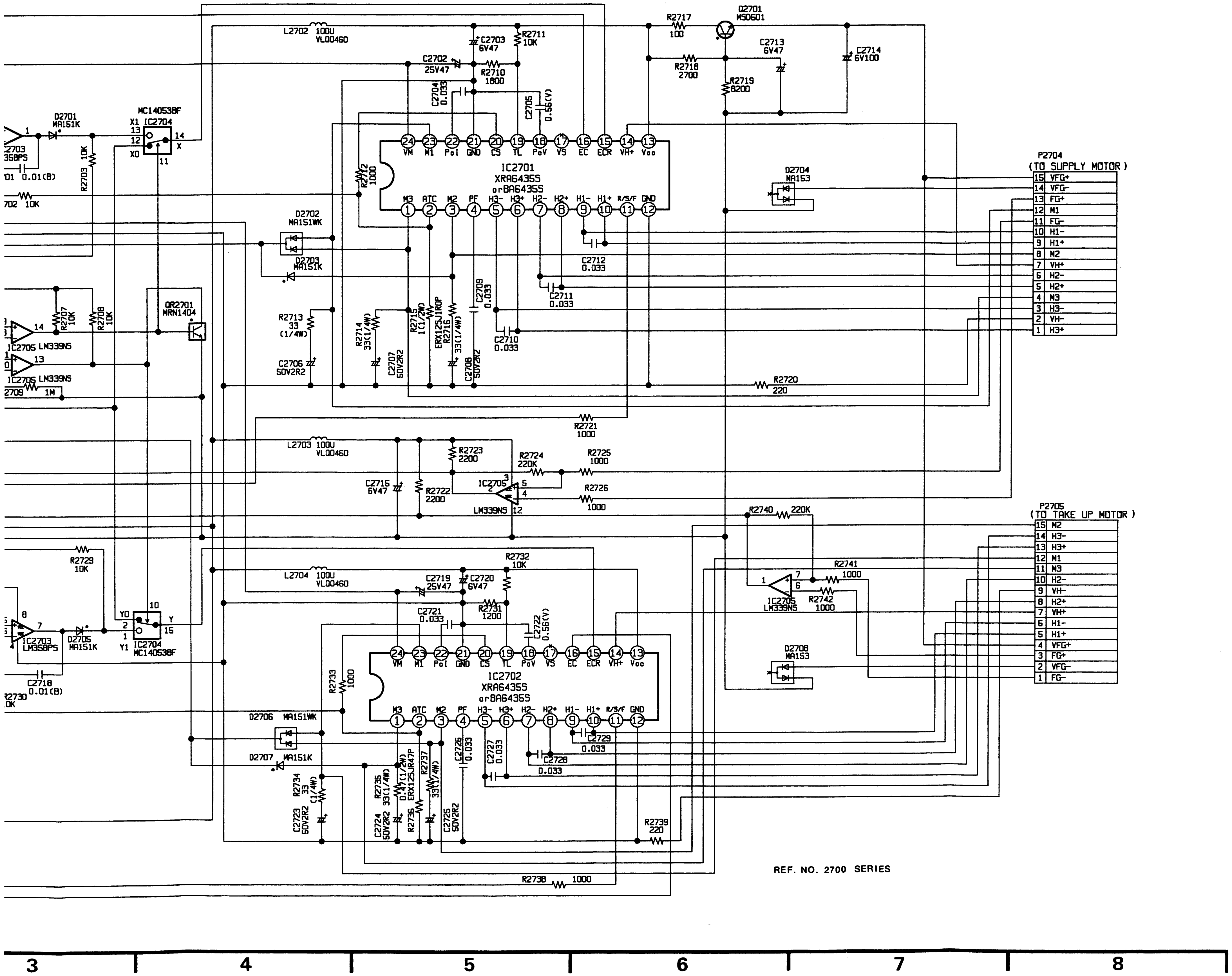
REF. NO.	Q2701																	
MODE	E	C	B															
PLAY	3.1	0	3.8															
REF. NO.	QR2701																	
MODE	E	C	B															
PLAY	0	5.2	0.1															

REEL DRIVE C.B.A. (VEP02399A) AND SOLENOID UNIT (VXA4840)


SOLENOID UNIT (VXA4840)
VJB00S52
P61003
P61002
P61001
NTP-N870A-T▲
(FOIL SIDE)
REEL DRIVE C.B.A. (VEP02399A)
REF.NO 2700 SERIES
(FOIL SIDE)
P2701
P2702
P2703
P2704
P2705
IC1
IC2
IC3
IC4
IC5
IC6
Q1
D1
D2
D3
D4
D5
D6
D7
L1
L2
L3
L4
C2
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C25
C26
C27
C28
C29
C42
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R43
J1
W93
W94
W95
W96
W97
W98
W99
W100
W102
W103
W104
W105
W106
W107
W108
W109
A
B
C
1
2
3
4
5

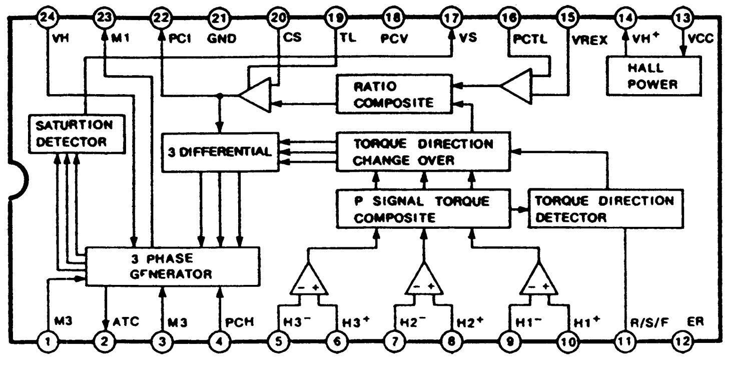
REEL DRIVE SCHEMATIC DIAGRAM


D
C
B
A
1
2
3
4
5
6
(TO SERVO)
P2006-1
P2006-2
P2006-3
P2006-4
P2702
S_REEL_VM
M_GND
T_REEL_VM
M_GND
(TO SYSTEM CTL)
(TO POWER (1))
(TO SYSTEM CTL)
(TO SERVO)
(TO SYSTEM CTL)
(TO SERVO)
(TO SYSTEM CTL)
P6002-5B
P1002-4,5
P1002-1,2,3
P1002-6
P1002-4,5
P6002-5A
P6002-6A
P6002-7A
P6002-8B
P2003-1
P6002-8A
P2003-3
P6002-9B
P6002-12B
P6002-9A
P6002-11B
P6002-10B
P6002-10A
P2701
REEL_SOL(H)
SW 5V
GND
SW 12V
GND
S_REEL_FG
T_REEL_FG
SR_PHOTO
V_REF
S_REEL_FB
SF_PHOTO
T_REEL_FB
CHANGE
T_REEL_RSF
S_REEL_ET
S_REEL_RSF
TOU
T_REEL_ET
MOTHER
(TO SOLENOID)
P61001-1
P61001-2
P61001-3
P61001-4
P61001-5
P61001-6
P61001-7
P61001-8
P2703
REEL_SOL(H)
SOL_GND
GND
SF_PHOTO
SF_LED
GND
SR_LED
SR_PHOTO
J2701
IC2703 LM358PS
D2701 MA151K
R2701 1K(G)
C2701 0.01(B)
R2702 10K
R2703 10K
MC14053BF IC2704
X1 X0 X
R2704 22K
R2705 12K
R2706 22K
R2707 10K
R2708 10K
IC2705 LM339NS
R2709 1M
QR2701 MRN1404
L2701 100U VL00460
L2702 100U VL00460
C2702 25V47
C2703 6V47
R2711 10K
R2710 1800
C2704 0.033
C2705 0.56(V)
VM M1 PoI GND CS TL PoV VS EC ECR VH+ Vcc
IC2701
XRA6435S
orBA6435S
M3 ATC M2 PF H3- H3+ H2- H2+ H1- H1+ R/S/F GND
R2712 1000
D2702 MA151WK
D2703 MA151K
R2713 33 (1/4W)
C2706 50V2R2
R2714 33(1/4W)
C2707 50V2R2
R2715 1(1/2W)
ERX12SJ1R0P R2716 33(1/4W)
C2708 50V2R2
C2709 0.033
C2710 0.033
C2711 0.033
C2712 0.033
R2717 100
Q2701 MSD601
R2718 2700
R2719 8200
C2713 6V47
R2721 1000
L2703 100U VL00460
C2715 6V47
R2722 2200
R2723 2200
IC2705 LM339NS
R2724 220K
R2725 1000
R2726 1000
R2740
C2716 6V47
C2717 6V47
R2728 82K
R2727 680
R2743 22K
IC2706 LM358PS
R2729 10K
IC2703 LM358PS
D2705 MA151K
C2718 0.01(B)
R2730 10K
Y0 Y1 Y
IC2704 MC14053BF
L2704 100U VL00460
C2719 25V47
C2720 6V47
R2732 10K
R2731 1200
C2721 0.033
C2722 0.56(V)
IC2702
XRA6435S
orBA6435S
R2733 1000
D2706 MA151WK
D2707 MA151K
R2734 33 (1/4W)
C2723 50V2R2
C2724 50V2R2
R2735 33(1/4W)
0.47(1/2W) ERX12SJR47P R2736
R2737 33(1/4W)
C2725 50V2R2
C2726 0.033
C2727 0.033
C2728 0.033
C2729 0.033
R2739 220
R2738 1000
IC2704 MC14053BF

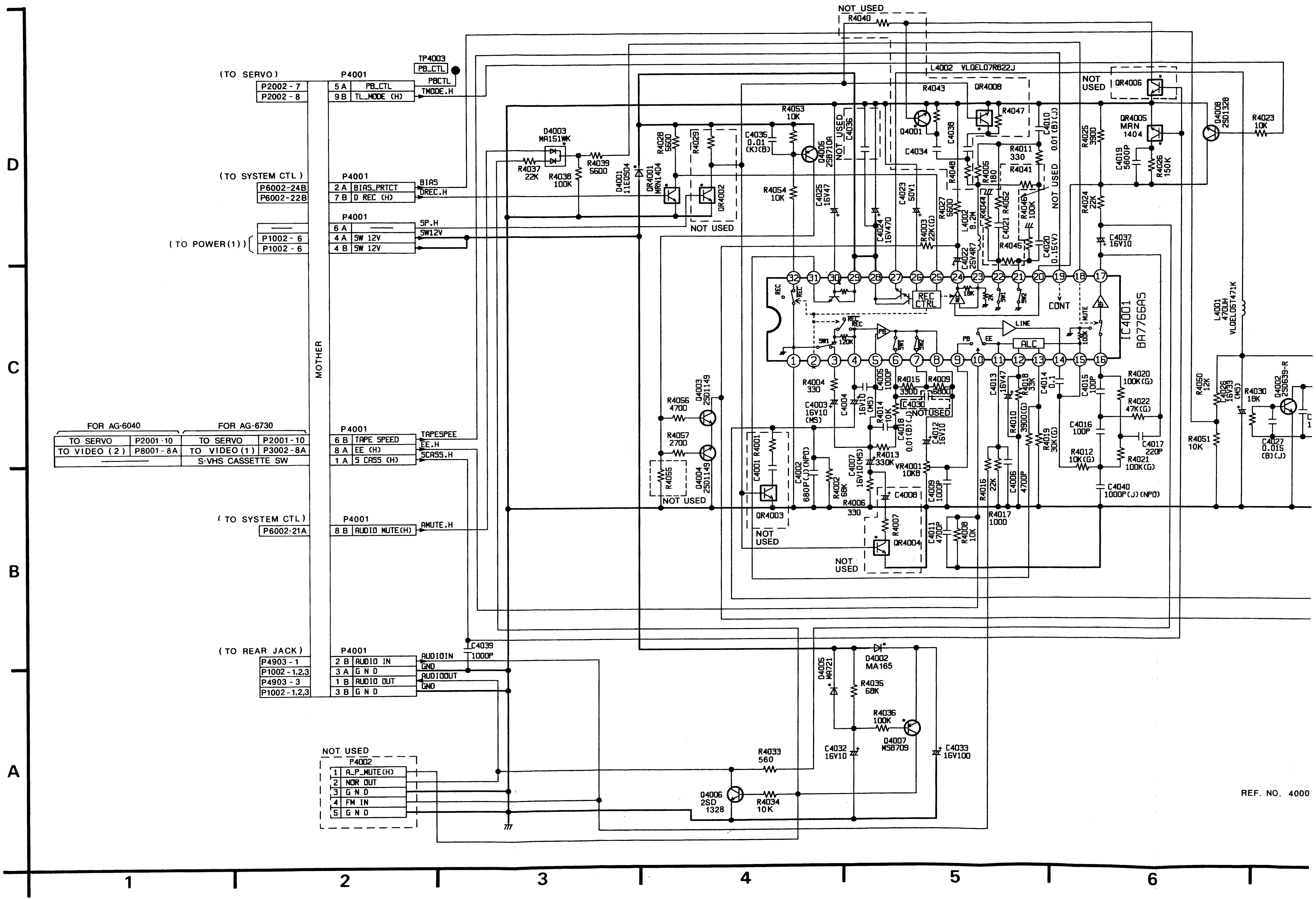

L2702 100U VL00460
R2717 100
Q2701 MSD601
C2703 6V47
R2711 10K
C2713 6V47
C2714 6V100
C2702 25V47
R2710 1800
R2718 2700
R2719 8200
C2704 0.033
C2705 0.56(V)
D2701 MA151K
MC14053BF
IC2704
IC2703 LM358PS
R2703 10K
0.01(B)
R2712 1000
IC2701
XRA6435S
orBA6435S
VM M1 PoI GND CS TL PoV VS EC ECR VH+ Vcc
M3 ATC M2 PF H3- H3+ H2- H2+ H1- H1+ R/S/F GND
D2704 MA153
P2704 (TO SUPPLY MOTOR)
15 VFG+
14 VFG-
13 FG+
12 M1
11 FG-
10 H1-
9 H1+
8 M2
7 VH+
6 H2-
5 H2+
4 M3
3 H3-
2 VH-
1 H3+
D2702 MA151WK
D2703 MA151K
C2712 0.033
C2711 0.033
C2710 0.033
QR2701 MRN1404
R2707 10K
R2708 10K
IC2705 LM339NS
R2709 1M
R2713 33 (1/4W)
C2706 50V2R2
R2714 33(1/4W)
C2707 50V2R2
R2715 1(1/2W)
ERK125J1R0P
R2716 33(1/4W)
C2709 0.033
C2708 50V2R2
R2720 220
R2721 1000
L2703 100U VL00460
R2723 2200
R2724 220K
R2725 1000
C2715 6V47
R2722 2200
IC2705 LM339NS
R2726 1000
R2740 220K
P2705 (TO TAKE UP MOTOR)
15 M2
14 H3-
13 H3+
12 M1
11 M3
10 H2-
9 VH-
8 H2+
7 VH+
6 H1-
5 H1+
4 VFG+
3 FG+
2 VFG-
1 FG-
R2729 10K
L2704 100U VL00460
R2732 10K
C2719 25V47
C2720 6V47
R2741 1000
R2742 1000
C2721 0.033
R2731 1200
C2722 0.56(V)
D2705 MA151K
IC2704 MC14053BF
C2718 0.01(B)
R2730 10K
R2733 1000
IC2702
XRA6435S
orBA6435S
D2708 MA153
D2706 MA151WK
D2707 MA151K
C2729 0.033
C2728 0.033
C2726 0.033
C2727 0.033
R2734 33 (1/4W)
C2723 50V2R2
R2735 33(1/4W)
R2736 ERK125JR47P
R2737 33(1/4W)
C2724 50V2R2
C2725 50V2R2
R2739 220
R2738 1000
3
4
5
6
7
8

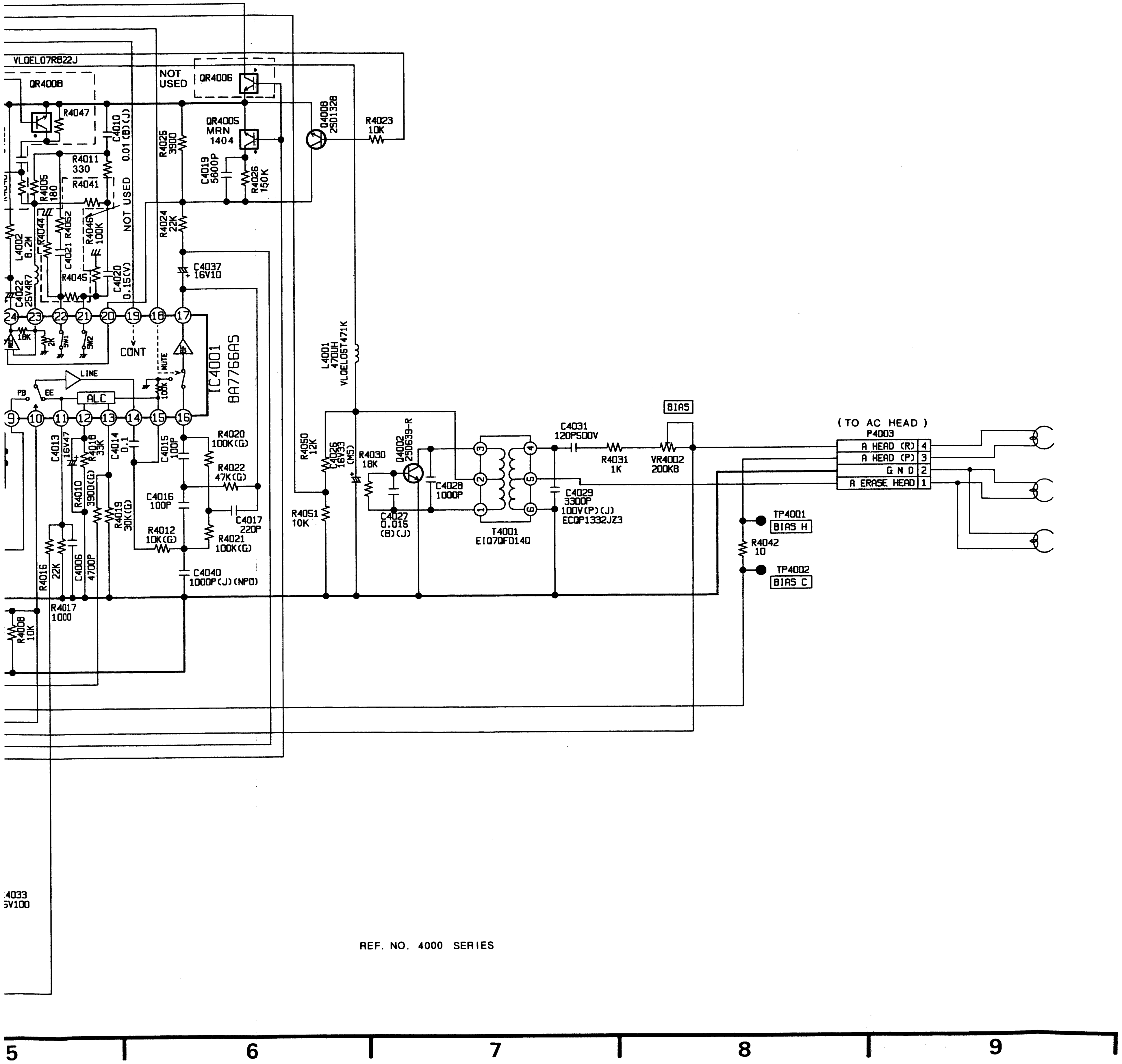
REF. NO. 2700 SERIES

IC2701,IC2702 XRA6435S

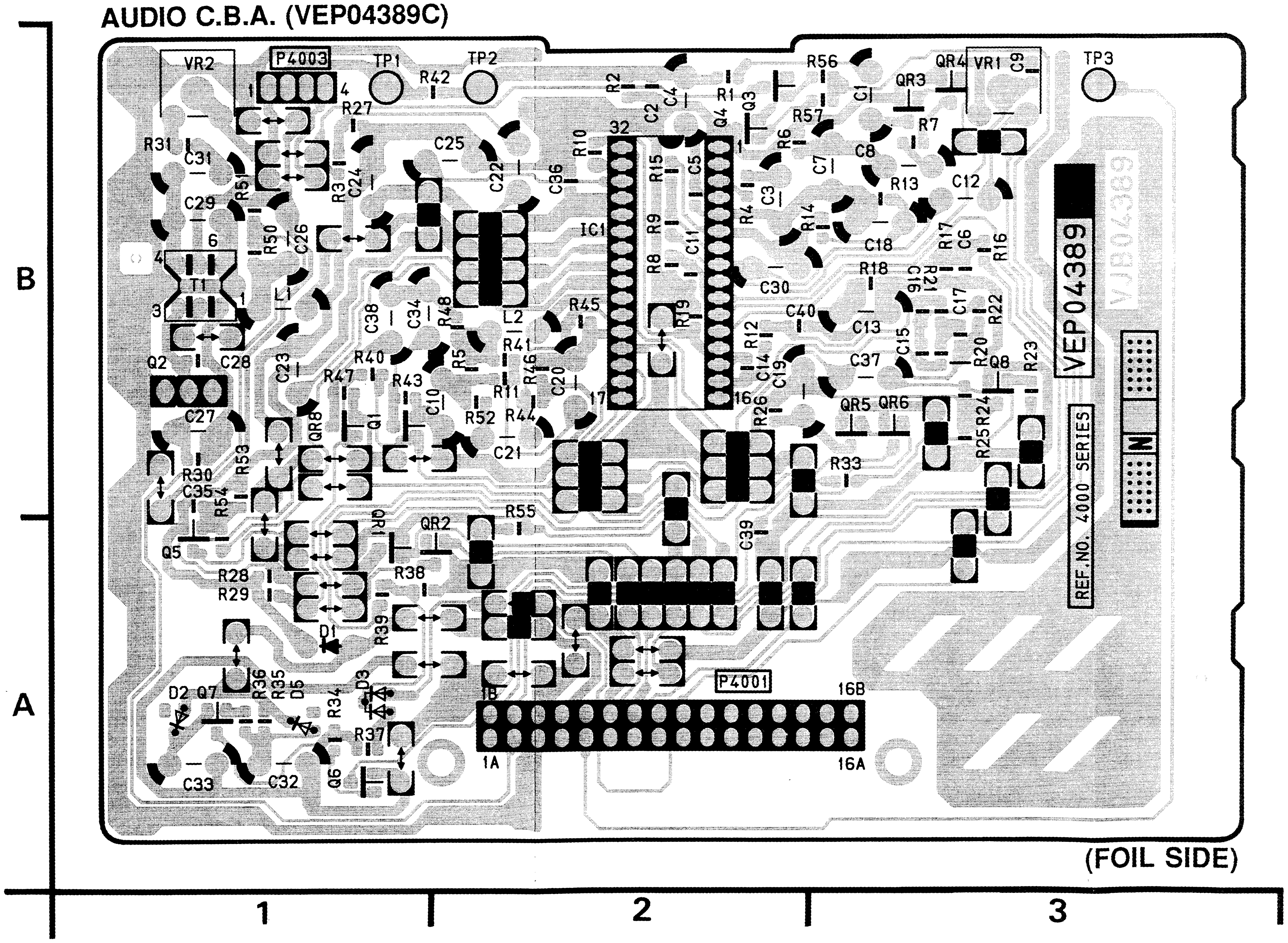

VH
M1
PCI
GND
CS
TL
PCV
VS
PCTL
VREX
VH+
VCC
HALL POWER
RATIO COMPOSITE
SATURTION DETECTOR
3 DIFFERENTIAL
TORQUE DIRECTION CHANGE OVER
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
3 PHASE GENERATOR
M3
ATC
M3
PCH
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
ER

AUDIO SCHEMATIC DIAGRAM

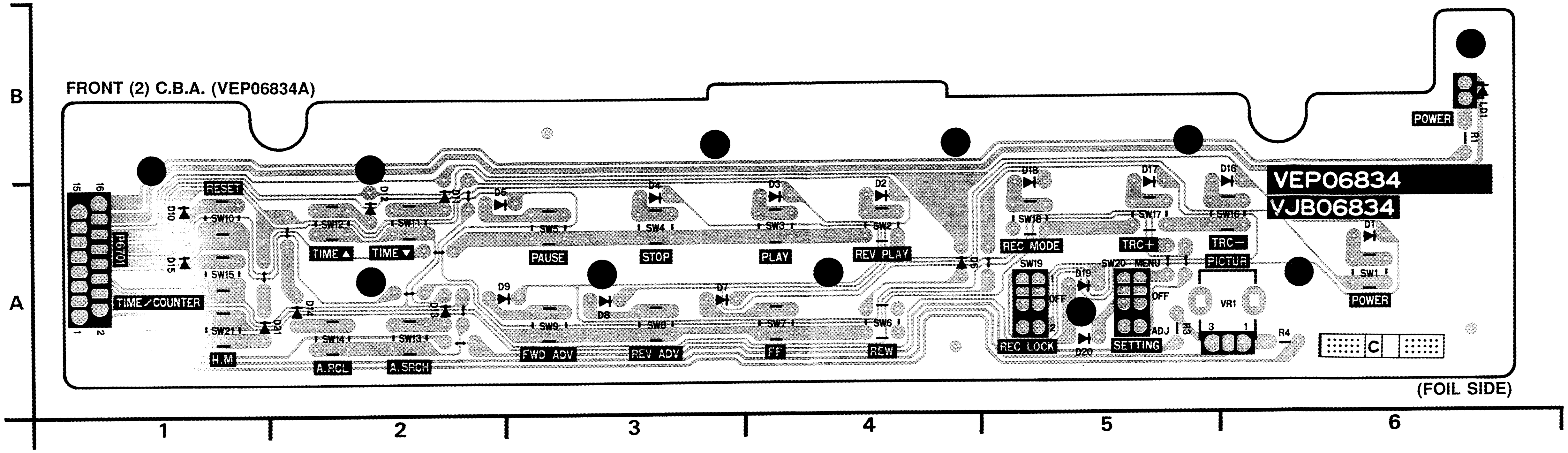

D
C
B
A
1
2
3
4
5
6
(TO SERVO)
P2002-7
P2002-8
P4001
5A PB_CTL
9B TL_MODE (H)
TP4003
PB_CTL
PBCTL
TMODE.H
(TO SYSTEM CTL)
P6002-24B
P6002-22B
2A BIAS_PRTCT
7B D REC (H)
BIAS
DREC.H
(TO POWER(1))
P1002-6
6A
4A SW 12V
4B SW 12V
SP.H
SW12V
MOTHER
FOR AG-6040
FOR AG-6730
TO SERVO P2001-10
TO VIDEO (2) P8001-8A
TO SERVO P2001-10
TO VIDEO (1) P3002-8A
S-VHS CASSETTE SW
6B TAPE SPEED
8A EE (H)
1A S CASS (H)
TAPESPEE
EE.H
SCASS.H
(TO SYSTEM CTL)
P6002-21A
8B AUDIO MUTE(H)
AMUTE.H
(TO REAR JACK)
P4903-1
P1002-1,2,3
P4903-3
P1002-1,2,3
2B AUDIO IN
3A GND
1B AUDIO OUT
3B GND
AUDIOIN
GND
AUDIOOUT
GND
C4039 1000P
NOT USED
P4002
1 A_P_MUTE(H)
2 NOR OUT
3 GND
4 FM IN
5 GND
D4003 MA151WK
R4037 22K
R4038 100K
R4039 5600
D4001 11ES0504
QR4001 MRN1404
R4028 5600
R4029
QR4002
NOT USED
R4053 10K
C4035 0.01 (K)(B)
Q4005 2SB710A
R4054 10K
C4025 16V47
NOT USED C4036
NOT USED
R4040
C4024 16V470
C4023 50V1
R4003 22K(G)
R4027 5600
L4002 VLQEL07R822J
R4043
QR4008
Q4001
C4038
C4034
R4047
R4048
R4005 180
R4011 330
R4041
R4044
L4002 8.2M
R4052
C4021
R4046 100K
C4010 0.01(B)(J)
NOT USED
C4022 25V4R7
R4045
C4020 0.15(V)
NOT USED
QR4006
QR4005 MRN 1404
C4019 5600P
R4026 150K
R4025 3900
R4024 22K
Q4008 2SD1328
R4023 10K
C4037 16V10
REC
REC CTRL
SW1
SW2
CONT
MUTE
LINE
PB
EE
ALC
SW1
120K
18K
100K
IC4001 BA7766AS
L4001 470UH VLQEL05T471K
R4050 12K
C4026 16V33 (MS)
R4030 18K
Q4002 2SD639-R
R4051 10K
C4027 0.015 (B)(J)
R4056 4700
Q4003 2SD1149
R4057 2700
Q4004 2SD1149
R4055
NOT USED
R4004 330
C4003 16V10 (MS)
C4004
C4005 1000P
C4001 R4001
QR4003
NOT USED
C4002 680P(J)(NPO)
R4002 68K
C4007 16V10(MS)
R4014 10K
C4018 0.01(B)(J)
R4015 3900
R4009 6800
C4030
NOT USED
C4012 16V10
R4013 330K
VR4001 10KB
R4006 330
C4008
R4007
QR4004
NOT USED
C4009 1000P
C4011 4700P
R4008 10K
C4013 16V47
R4018 33K
R4010 3900(G)
R4019 30K(G)
C4014 0.1
R4016 22K
C4006 4700P
R4017 1000
C4015 100P
C4016 100P
R4012 10K(G)
R4020 100K(G)
R4022 47K(G)
C4017 220P
R4021 100K(G)
C4040 1000P(J)(NPO)
D4005 MA4721
D4002 MA165
R4035 68K
R4036 100K
Q4007 M58709
C4032 16V10
C4033 16V100
R4033 560
Q4006 2SD1328
R4034 10K
REF. NO. 4000


VLQEL07R822J
QR4008
R4047
NOT USED
QR4006
QR4005
MRN
1404
Q4008
2SD1328
R4023
10K
C4010
0.01(B)(J)
R4011
330
R4041
R4005
180
R4025
3900
C4019
5600P
R4026
150K
NOT USED
R4024
22K
R4044
R4052
C4021
R4046
100K
L4002
8.2M
C4022
25V4R7
R4045
C4020
0.15(V)
C4037
16V10
CONT
MUTE
LINE
PB
EE
ALC
IC4001
BA7766AS
L4001
470UH
VLQEL05T471K
C4013
16V47
R4018
33K
C4014
0.1
C4015
100P
R4020
100K(G)
R4022
47K(G)
R4010
3900(G)
R4019
30K(G)
C4016
100P
C4017
220P
R4012
10K(G)
R4021
100K(G)
C4040
1000P(J)(NPO)
R4016
22K
C4006
4700P
R4017
1000
R4008
10K
R4050
12K
C4026
16V33
(MS)
R4051
10K
R4030
18K
Q4002
2SD639-R
C4027
0.015
(B)(J)
C4028
1000P
T4001
EI07QF014Q
C4031
120P500V
R4031
1K
BIAS
VR4002
200KB
C4029
3300P
100V(P)(J)
ECQP1332JZ3
(TO AC HEAD)
P4003
A HEAD (R) 4
A HEAD (P) 3
G N D 2
A ERASE HEAD 1
TP4001
BIAS H
R4042
10
TP4002
BIAS C
4033
5V100
REF. NO. 4000 SERIES
5
6
7
8
9

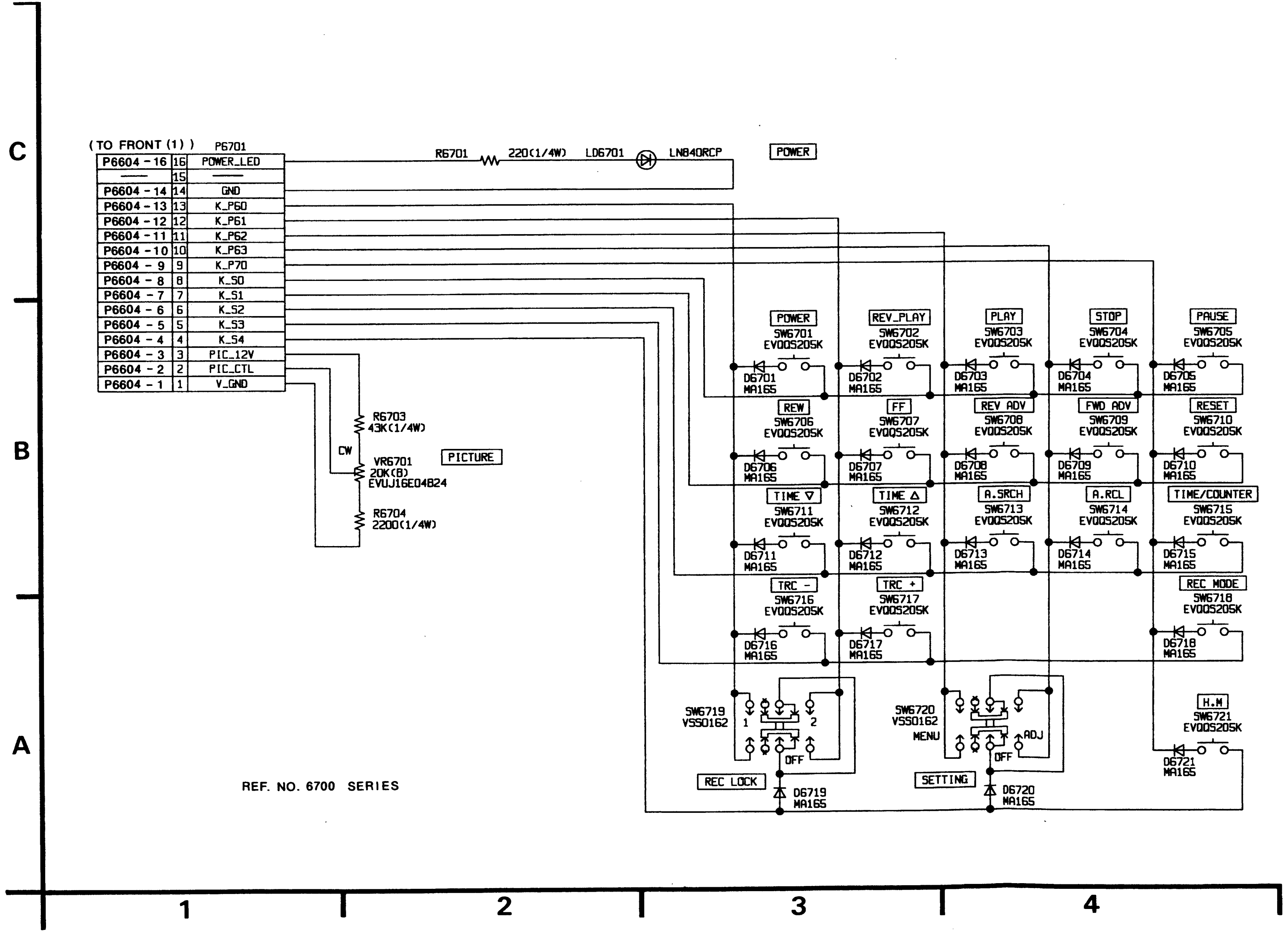
AUDIO C.B.A. (VEP04389C)


AUDIO C.B.A. (VEP04389C)
VR2
P4003
TP1
R42
TP2
R2
C4
R1
Q3
R56
C1
QR3
QR4
VR1
C9
TP3
R27
C2
Q4
R57
R6
C8
R7
R31
C31
C25
R10
32
C5
R15
C7
R13
C12
R51
R3
C24
C22
C36
C3
R4
C29
IC1
R9
R14
C18
R17
C6
R16
R50
C26
C11
6
4
T1
3
1
R8
R18
C16
R21
C30
L1
C38
C34
R48
L2
R45
R19
C40
C17
R22
C13
C15
Q2
C28
R40
R41
R5
R46
R12
C14
C19
C37
R20
Q8
R23
C23
R47
R43
R11
C20
17
16
R26
QR5
QR6
R24
C27
C10
Q1
R52
R44
R25
QR8
C21
R33
R30
R53
C35
R54
QR1
QR2
R55
C39
Q5
R28
R29
R38
D1
R39
D2
Q7
R36
R35
D5
R34
D3
P4001
16B
1B
R37
C33
C32
Q6
1A
16A
VEP04389
VJB04389
REF. NO. 4000 SERIES
N
(FOIL SIDE)
B
A
1
2
3

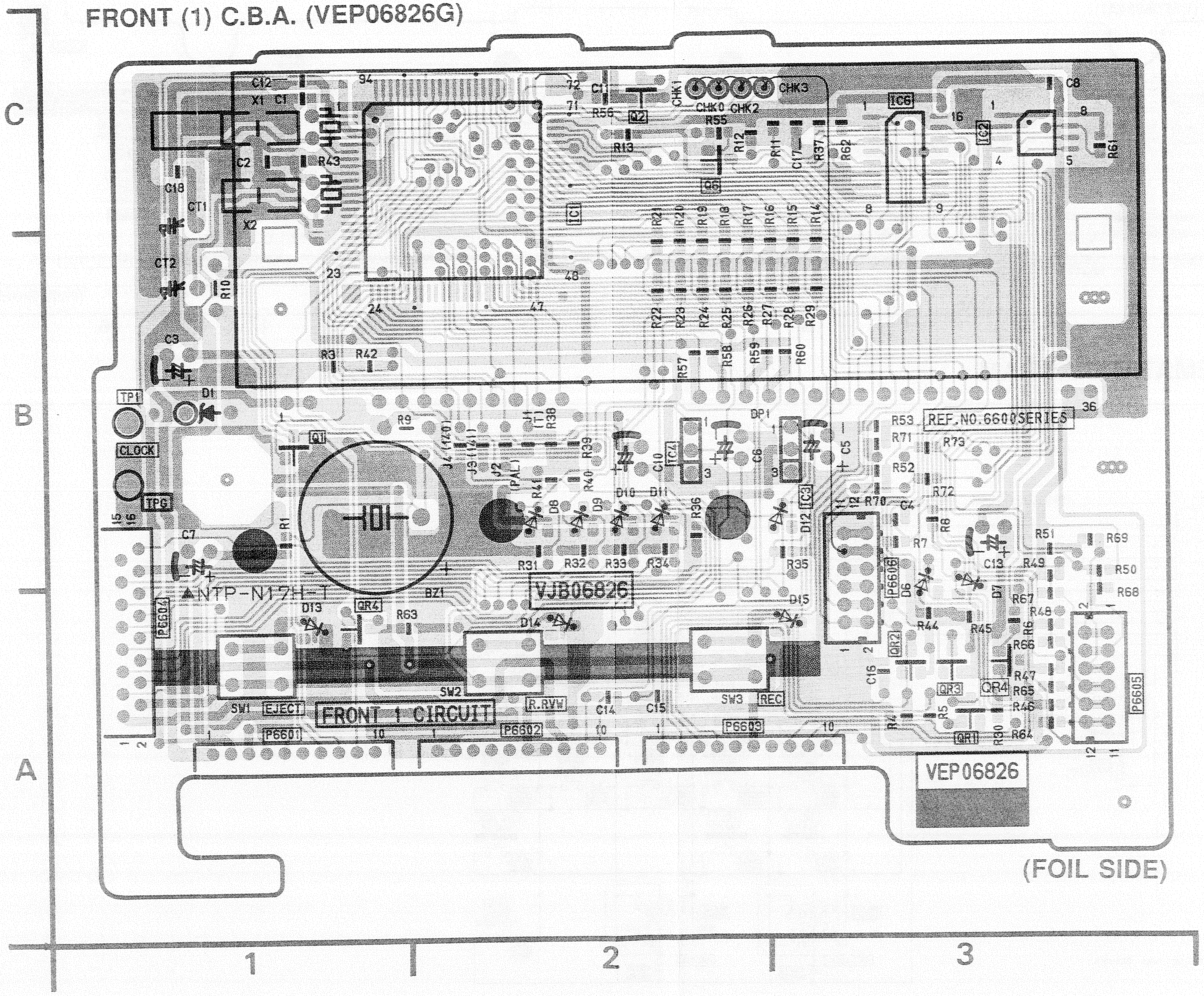
FRONT (2) C.B.A. (VEP06834A)


FRONT (2) C.B.A. (VEP06834A)
VEP06834
VJB06834
P6701
RESET
SW10
SW15
SW21
TIME / COUNTER
H.M
SW12
SW11
TIME ▲
TIME ▼
SW14
SW13
A.RCL
A.SRCH
D10
D15
D21
D12
D11
D14
D13
D5
D4
D3
D2
SW5
SW4
SW3
SW2
PAUSE
STOP
PLAY
REV PLAY
D9
D8
D7
SW9
SW8
SW7
SW6
FWD ADV
REV ADV
FF
REW
D18
D17
D16
D1
SW18
SW17
SW16
SW1
REC MODE
TRC＋
TRC－
PICTUR
POWER
SW19
SW20
MENU
OFF
ADJ
D19
D20
REC LOCK
SETTING
VR1
R3
R4
R1
LD1
POWER
C
(FOIL SIDE)
A
B
1
2
3
4
5
6

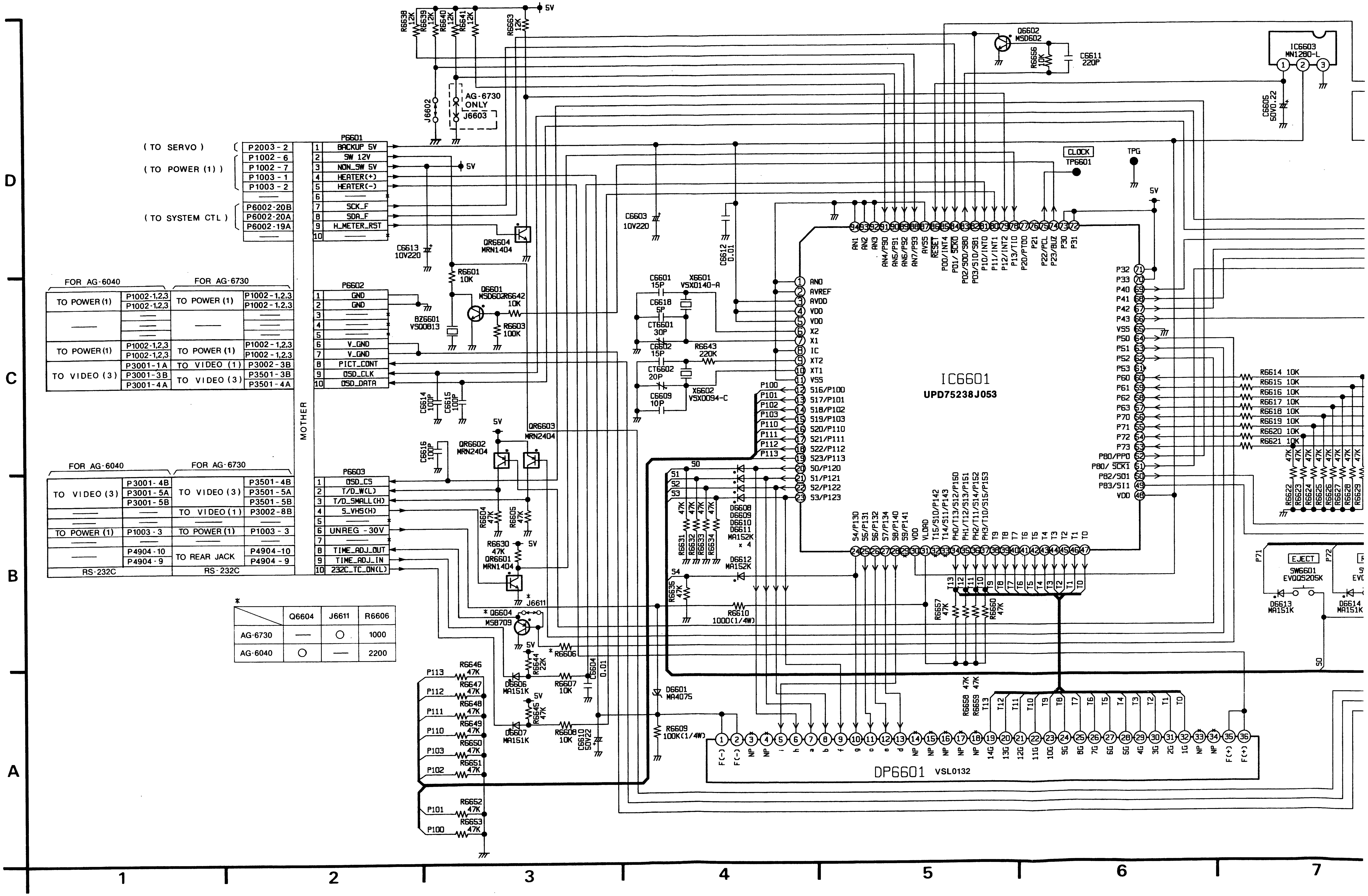
FRONT (2) SCHEMATIC DIAGRAM


(TO FRONT (1))
P6701
P6604 - 16
16
POWER_LED
15
P6604 - 14
14
GND
P6604 - 13
13
K_P60
P6604 - 12
12
K_P61
P6604 - 11
11
K_P62
P6604 - 10
10
K_P63
P6604 - 9
9
K_P70
P6604 - 8
8
K_S0
P6604 - 7
7
K_S1
P6604 - 6
6
K_S2
P6604 - 5
5
K_S3
P6604 - 4
4
K_S4
P6604 - 3
3
PIC_12V
P6604 - 2
2
PIC_CTL
P6604 - 1
1
V_GND
R6701
220(1/4W)
LD6701
LN840RCP
POWER
R6703
43K(1/4W)
CW
VR6701
20K(B)
EVUJ16E04B24
PICTURE
R6704
2200(1/4W)
POWER
SW6701
EVQQS205K
D6701
MA165
REV_PLAY
SW6702
EVQQS205K
D6702
MA165
PLAY
SW6703
EVQQS205K
D6703
MA165
STOP
SW6704
EVQQS205K
D6704
MA165
PAUSE
SW6705
EVQQS205K
D6705
MA165
REW
SW6706
EVQQS205K
D6706
MA165
FF
SW6707
EVQQS205K
D6707
MA165
REV ADV
SW6708
EVQQS205K
D6708
MA165
FWD ADV
SW6709
EVQQS205K
D6709
MA165
RESET
SW6710
EVQQS205K
D6710
MA165
TIME ▽
SW6711
EVQQS205K
D6711
MA165
TIME △
SW6712
EVQQS205K
D6712
MA165
A.SRCH
SW6713
EVQQS205K
D6713
MA165
A.RCL
SW6714
EVQQS205K
D6714
MA165
TIME/COUNTER
SW6715
EVQQS205K
D6715
MA165
TRC -
SW6716
EVQQS205K
D6716
MA165
TRC +
SW6717
EVQQS205K
D6717
MA165
REC MODE
SW6718
EVQQS205K
D6718
MA165
SW6719
VSS0162
1
2
OFF
REC LOCK
D6719
MA165
SW6720
VSS0162
MENU
ADJ
OFF
SETTING
D6720
MA165
H.M
SW6721
EVQQS205K
D6721
MA165
REF. NO. 6700 SERIES
C
B
A
1
2
3
4

FRONT (1) C.B.A. (VEP06826G)

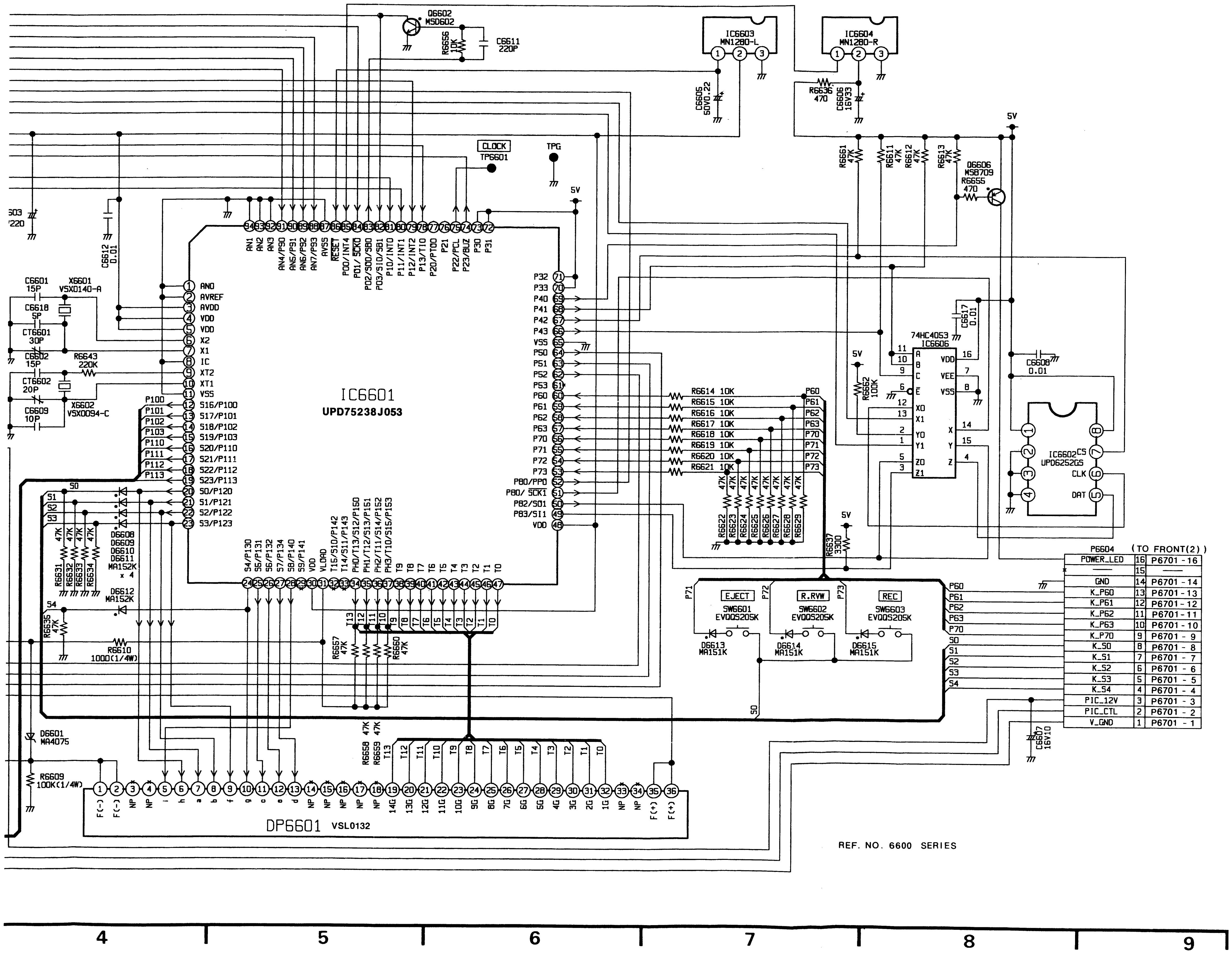

FRONT (1) C.B.A. (VEP06826G)
C
B
A
1
2
3
(FOIL SIDE)
C12
X1
C1
X2
C2
C18
CT1
CT2
C3
R10
R43
94
72
71
1
23
24
47
48
IC1
R3
R42
C11
R56
Q2
R13
Q5
CHK1
CHK0
CHK2
CHK3
R55
R12
R11
C17
R37
R62
R21
R20
R19
R18
R17
R16
R15
R14
R22
R23
R24
R25
R26
R27
R28
R29
R57
R58
R59
R60
IC6
IC2
16
8
4
5
9
C8
R61
TP1
D1
CLOCK
TPG
R9
Q1
J4 (Y40)
J3 (Y41)
J2 (PAL)
J1 (T1)
R38
R39
R40
R4
D8
D9
D10
D11
C10
IC4
DP1
C6
IC3
C5
R36
D12
R53
R71
R52
R72
R70
R73
REF. NO. 6600SERIES
36
C4
R8
R7
C13
R51
R69
R49
R50
R68
R67
R48
R6
R66
R47
R65
R46
R64
R45
R44
D6
D7
P6606
QR2
C16
QR3
QR4
QR1
R4
R5
R30
P6605
12
11
C7
R1
R31
R32
R33
R34
R35
D15
VJB06826
▲NTP-N17H-T
BZ1
D13
QR4
R63
D14
P6604
SW1
EJECT
SW2
FRONT 1 CIRCUIT
R.RVW
C14
C15
SW3
REC
P6601
P6602
P6603
10
VEP06826

FRONT (1) SCHEMATIC DIAGRAM

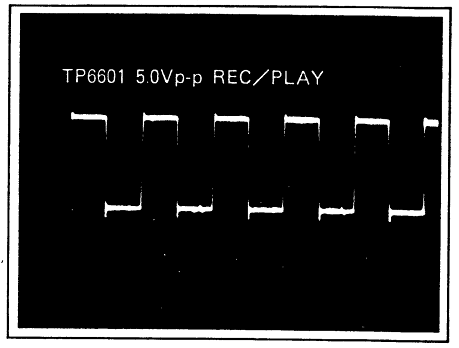


D
C
B
A
1
2
3
4
5
6
7
5V
R6638 12K
R6639 12K
R6640 12K
R6641 12K
R6663 12K
J6602
AG-6730 ONLY
J6603
(TO SERVO)
(TO POWER (1))
(TO SYSTEM CTL)
P2003-2
P1002-6
P1002-7
P1003-1
P1003-2
P6002-20B
P6002-20A
P6002-19A
P6601
BACKUP 5V
SW 12V
NON_SW 5V
HEATER(+)
HEATER(-)
SCK_F
SDA_F
H_METER_RST
C6613 10V220
QR6604 MRN1404
R6601 10K
Q6601 MSD602R
R6642 10K
R6603 100K
BZ6601 VSB0813
FOR AG-6040
FOR AG-6730
TO POWER (1)
TO VIDEO (3)
TO VIDEO (1)
TO REAR JACK
RS-232C
P6602
GND
V_GND
PICT_CONT
OSD_CLK
OSD_DATA
MOTHER
C6614 100P
C6615 100P
C6616 100P
QR6602 MRN2404
QR6603 MRN2404
P6603
OSD_CS
T/D_W(L)
T/D_SMALL(H)
S_VHS(H)
UNREG -30V
TIME_ADJ_OUT
TIME_ADJ_IN
232C_TC_ON(L)
R6604 47K
R6605 47K
R6630 47K
QR6601 MRN1404
J6611
Q6604 MSB709
R6606
R6644 22K
D6606 MA151K
R6607 10K
R6645 47K
D6607 MA151K
R6608 10K
C6604 0.01
C6610 50V22
R6646 47K
R6647 47K
R6648 47K
R6649 47K
R6650 47K
R6651 47K
R6652 47K
R6653 47K
P113
P112
P111
P110
P103
P102
P101
P100
C6603 10V220
C6612 0.01
C6601 15P
X6601 VSX0140-A
C6618 5P
CT6601 30P
C6602 15P
R6643 220K
CT6602 20P
C6609 10P
X6602 VSX0094-C
S1
S2
S3
S4
S0
R6631 47K
R6632 47K
R6633 47K
R6634 47K
D6608 D6609 D6610 D6611 MA152K x 4
D6612 MA152K
R6635 47K
R6610 1000(1/4W)
D6601 MA4075
R6609 100K(1/4W)
IC6601
UPD75238J053
AN0
AVREF
AVDD
VDD
X2
X1
IC
XT2
XT1
VSS
S16/P100
S17/P101
S18/P102
S19/P103
S20/P110
S21/P111
S22/P112
S23/P113
S0/P120
S1/P121
S2/P122
S3/P123
S4/P130
S5/P131
S6/P132
S7/P134
S8/P140
S9/P141
VLOAD
T15/S10/P142
T14/S11/P143
PH0/T13/S12/P150
PH1/T12/S13/P151
PH2/T11/S14/P152
PH3/T10/S15/P153
T9
T8
T7
T6
T5
T4
T3
T2
T1
T0
AN1
AN2
AN3
AN4/P90
AN5/P91
AN6/P92
AN7/P93
AVSS
RESET
P00/INT4
P01/SCK0
P02/S00/SB0
P03/SI0/SB1
P10/INT0
P11/INT1
P12/INT2
P13/TI0
P20/PTO0
P21
P22/PCL
P23/BUZ
P30
P31
P32
P33
P40
P41
P42
P43
P50
P51
P52
P53
P60
P61
P62
P63
P70
P71
P72
P73
P80/PP0
P80/SCK1
P82/S01
P83/SI1
Q6602 MSD602
R6656 10K
C6611 220P
CLOCK
TP6601
TPG
IC6603 MN1280-L
C6605 50V0.22
R6614 10K
R6615 10K
R6616 10K
R6617 10K
R6618 10K
R6619 10K
R6620 10K
R6621 10K
R6622 47K
R6623 47K
R6624 47K
R6625 47K
R6626 47K
R6627 47K
R6628 47K
R6629 47K
R6657 47K
R6660 47K
R6658 47K
R6659 47K
EJECT
SW6601 EVQQ5205K
D6613 MA151K
D6614 MA151K
P71
P72
DP6601 VSL0132
F(-)
NP
14G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
F(+)

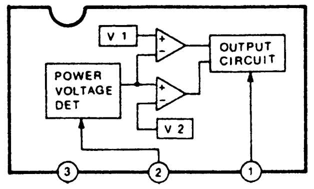
*	Q6604	J6611	R6606
AG-6730	—	○	1000
AG-6040	○	—	2200


IC6601
UPD75238J053
Q6602 MSD602
C6611 220P
R6656 10K
IC6603 MN1280-L
IC6604 MN1280-R
C6605 50V0.22
R6636 470
C6606 16V33
CLOCK TP6601
TPG
5V
C6612 0.01
C6601 15P
X6601 VSX0140-A
C6618 5P
CT6601 30P
C6602 15P
R6643 220K
CT6602 20P
X6602 VSX0094-C
C6609 10P
R6661 47K
R6611 47K
R6612 47K
R6613 47K
Q6606 MSB709
R6655 470
74HC4053
IC6606
C6617 0.01
C6608 0.01
R6662 100K
IC6602 UPD6252GS
CS
CLK
DAT
R6614 10K
R6615 10K
R6616 10K
R6617 10K
R6618 10K
R6619 10K
R6620 10K
R6621 10K
R6622 R6623 R6624 R6625 R6626 R6627 R6628 R6629 47K
R6637 3300
D6608 D6609 D6610 D6611 MA152K x 4
D6612 MA152K
R6631 R6632 R6633 R6634 47K
R6635 47K
R6610 100Ω(1/4W)
R6657 47K
R6660 47K
EJECT SW6601 EVQQS205K
R.RVW SW6602 EVQQS205K
REC SW6603 EVQQS205K
D6613 MA151K
D6614 MA151K
D6615 MA151K
D6601 MA4075
R6609 100K(1/4W)
R6658 47K
R6659 47K
C6607 16V10
DP6601 VSL0132
P6604 (TO FRONT(2))
POWER_LED 16 P6701 - 16
15
GND 14 P6701 - 14
K_P60 13 P6701 - 13
K_P61 12 P6701 - 12
K_P62 11 P6701 - 11
K_P63 10 P6701 - 10
K_P70 9 P6701 - 9
K_S0 8 P6701 - 8
K_S1 7 P6701 - 7
K_S2 6 P6701 - 6
K_S4 4 P6701 - 4
K_S3 5 P6701 - 5
PIC_12V 3 P6701 - 3
PIC_CTL 2 P6701 - 2
V_GND 1 P6701 - 1
4
5
6
7
8
9

REF. NO. 6600 SERIES

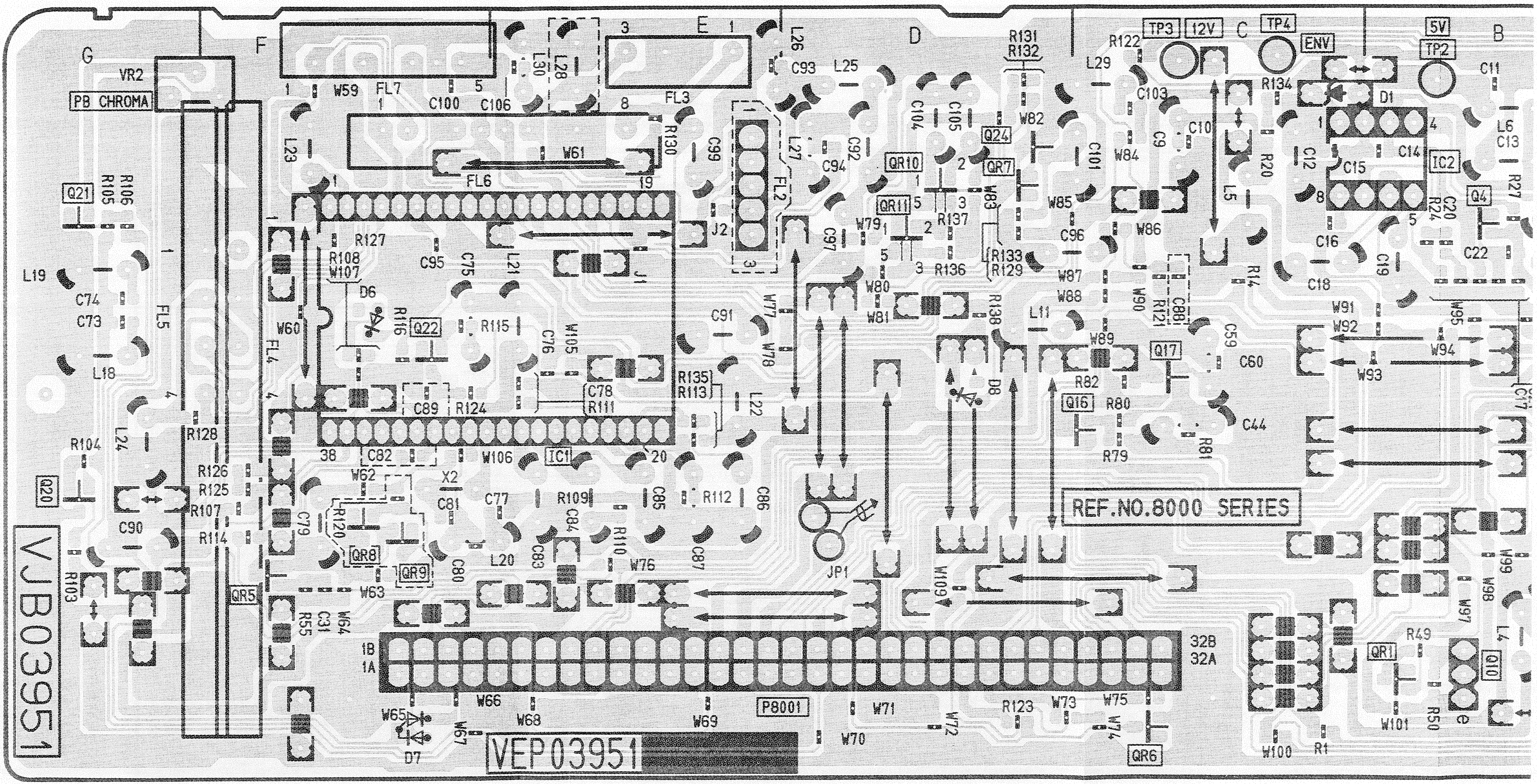

TP6601 5.0Vp-p REC/PLAY

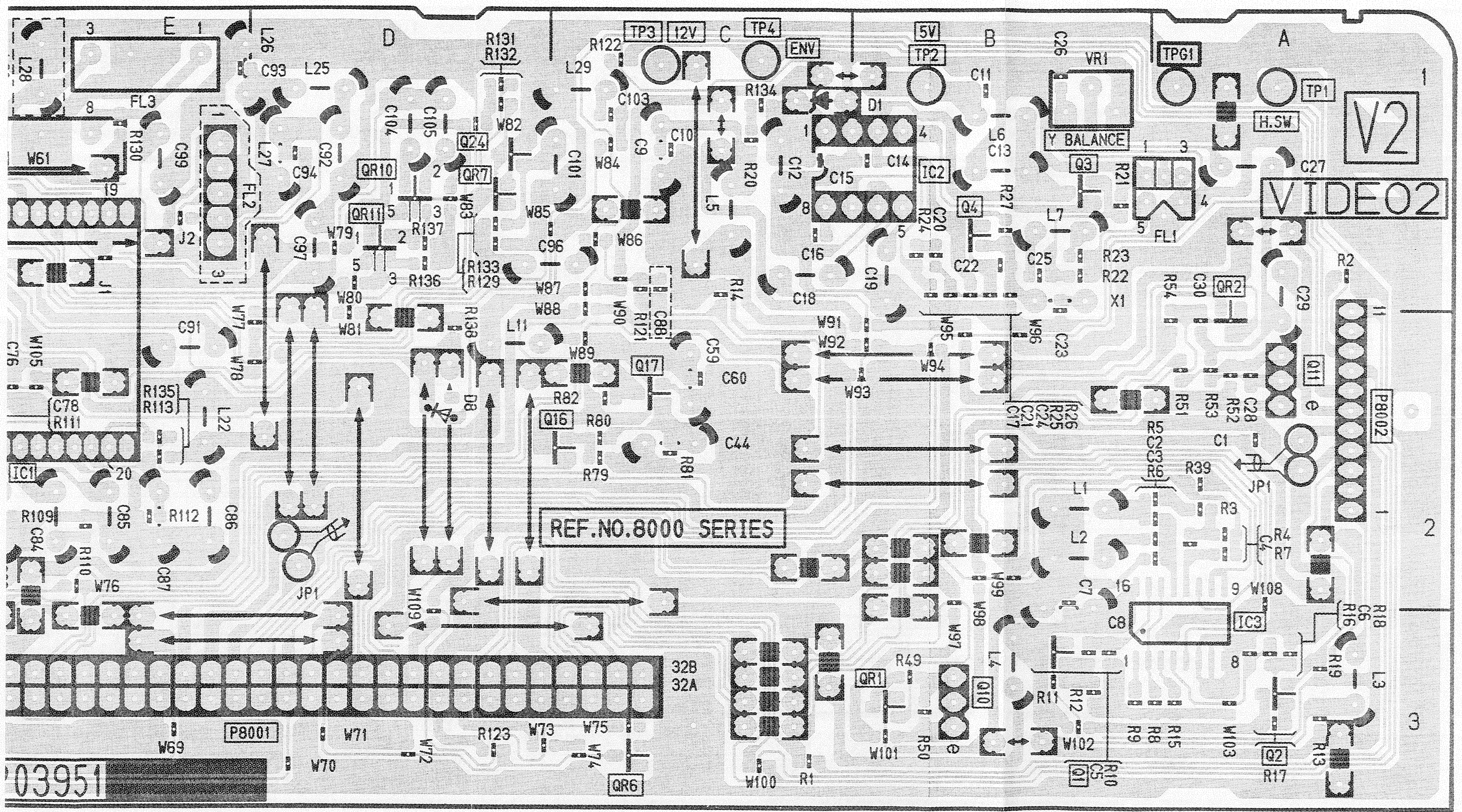
IC6603 MN1280-L
IC6604 MN1280-R


V 1
V 2
POWER VOLTAGE DET
OUTPUT CIRCUIT
3
2
1

VIDEO (2) C.B.A. (VEP03951B)

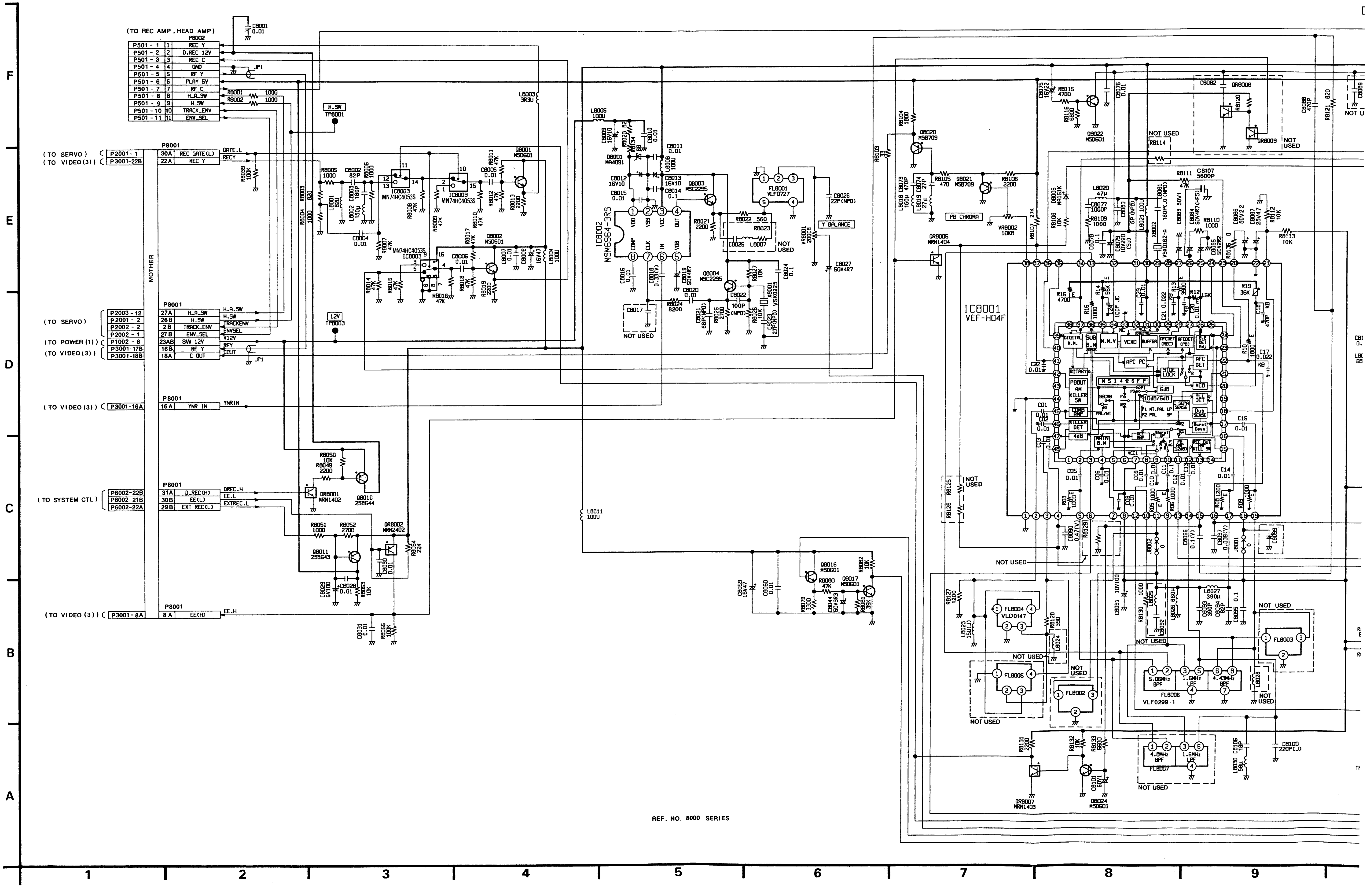
VIDEO (2) C.B.A. (VEP03951B)


G
F
E
D
C
B
VR2
PB CHROMA
W59
FL7
C100
C106
L30
L28
FL3
R130
W61
FL6
L23
Q21
R106
R105
L19
C74
C73
FL5
L18
FL4
W60
R127
R108
W107
D6
R116
Q22
R115
C95
C75
L21
J1
C76
W105
C78
R111
C89
R124
R128
R104
L24
Q20
R126
R125
R107
R114
C90
R103
QR5
C79
R120
QR8
QR9
C80
W62
X2
C81
C77
R109
C84
R110
C83
L20
W63
R55
C31
W64
C82
W106
IC1
C85
R112
C86
C87
W76
JP1
L26
C93
L25
C99
J2
FL2
L27
C92
C94
C97
W77
W78
C91
R135
R113
L22
C104
C105
QR10
QR11
R137
W79
R136
W80
W81
Q24
W82
QR7
W83
R133
R129
R138
L11
D8
R131
R132
L29
C101
W84
W85
W86
C96
W87
W88
W89
W90
R121
C88
R82
Q16
R80
R79
Q17
R81
C44
C59
C60
R122
TP3
12V
TP4
ENV
C103
C9
C10
R134
R20
L5
R14
5V
TP2
C11
D1
C12
C14
C15
IC2
L6
C13
R27
R24
C20
Q4
C16
C18
C19
C22
W91
W92
W93
W94
W95
C17
REF.NO.8000 SERIES
W109
W99
W98
W97
R49
QR1
Q10
L4
R50
W101
W100
R1
VJB03951
1B
1A
32B
32A
W65
D7
W67
W66
W68
W69
P8001
W71
W70
W72
R123
W73
W75
W74
QR6
VEP03951

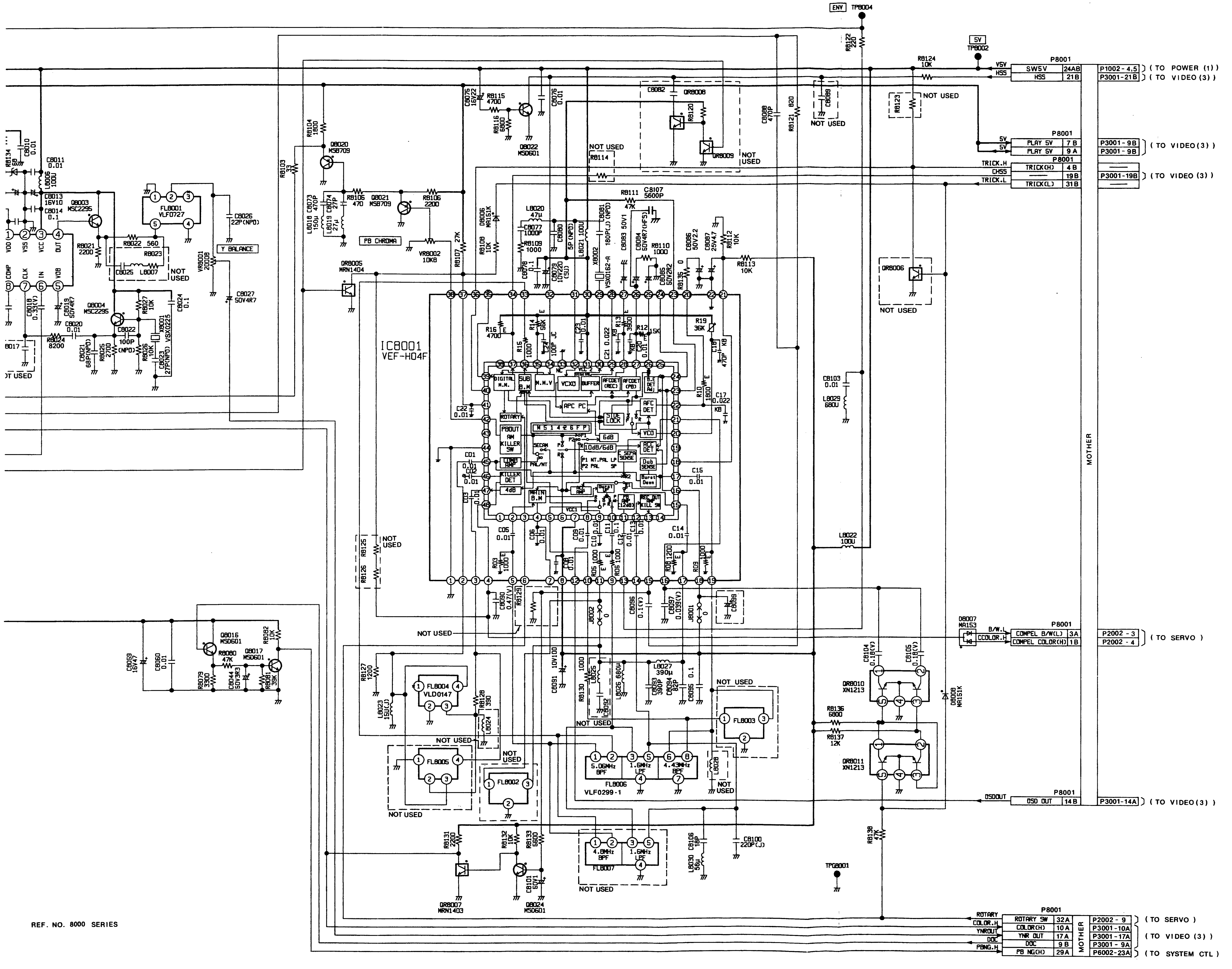

V2
VIDEO2
REF.NO.8000 SERIES
A
B
C
D
E
1
2
3
TP1
TP2
TP3
TP4
TPG1
12V
5V
ENV
H.SW
Y BALANCE
VR1
IC1
IC2
IC3
D1
D8
FL1
FL2
FL3
J1
J2
JP1
X1
P8001
P8002
32B
32A
Q1
Q2
Q3
Q4
Q10
Q11
Q16
Q17
Q24
QR1
QR2
QR6
QR7
QR10
QR11
L1
L2
L3
L4
L5
L6
L7
L11
L22
L25
L26
L27
L28
L29
W61
W69
W70
W71
W72
W73
W74
W75
W76
W100
W101
W102
W103
W108
W109
R1
R2
R13
R17
R49
R50
R122
R123
R131
R132
R134
C27
C44
C59
C60
C93
C103
03951

(FOIL SIDE)

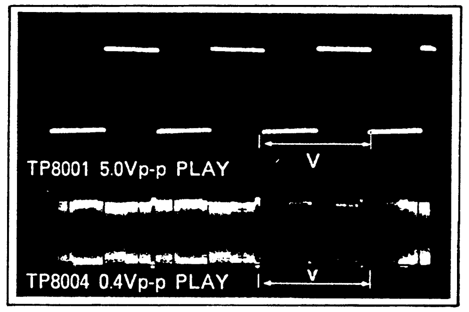
VIDEO (2) SCHEMATIC DIAGRAM



F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
(TO REC AMP, HEAD AMP)
P8002
P501-1 1 REC Y
P501-2 2 D.REC 12V
P501-3 3 REC C
P501-4 4 GND
P501-5 5 RF Y
P501-6 6 PLAY 5V
P501-7 7 RF C
P501-8 8 H_A_SW
P501-9 9 H_SW
P501-10 10 TRACK_ENV
P501-11 11 ENV_SEL
JP1
R8001 1000
R8002 1000
C8001 0.01
H.SW
TP8001
(TO SERVO) P2001-1 30A REC GATE(L)
(TO VIDEO(3)) P3001-22B 22A REC Y
P8001
GATE.L
RECY
MOTHER
(TO SERVO) P2003-12 27A H_A_SW
P2001-2 26B H_SW
P2002-2 2B TRACK_ENV
P2002-1 27B ENV_SEL
(TO POWER (1)) P1002-6 23AB SW 12V
(TO VIDEO(3)) P3001-17B 16B RF Y
P3001-18B 18A C OUT
12V
TP8003
(TO VIDEO(3)) P3001-16A 16A YNR IN
YNRIN
(TO SYSTEM CTL) P6002-22B 31A D_REC(H)
P6002-21B 30B EE(L)
P6002-22A 29B EXT REC(L)
DREC.H
EE.L
EXTREC.L
(TO VIDEO(3)) P3001-8A 8A EE(H)
EE.H
IC8003 MN74HC4053S
Q8001 MSD601
Q8002 MSD601
L8003 3R3U
L8005 100U
D8001 MA4091
IC8002 M5M6564-3R5
Q8003 MSC2295
Q8004 MSC2295
FL8001 VLF0727
X8001 VSX0225
Y BALANCE
VR8001 2008
L8011 100U
QR8001 MRN1402
Q8010 2SB644
Q8011 2SB643
QR8002 MRN2402
Q8016 MSD601
Q8017 MSD601
Q8020 MSB709
Q8021 MSB709
Q8022 MSD601
PB CHROMA
VR8002 10K8
QR8005 MRN1404
IC8001
VEF-H04F
DIGITAL M.M.
SUB B.M
M.M.V
VCXO
BUFFER
AFCDET (REC)
AFCDET (PB)
APC PC
SIDE LOCK
AFC DET
ROTARY
PBOUT AM KILLER SW
M51426FP
VCO
ACC DET
COMB AMP
KILLER DET
4dB
10dB/6dB
6dB
X8002
NOT USED
QR8006
QR8009
FL8004 VLD0147
FL8005
FL8002
FL8003
FL8006 VLF0299-1
5.06MHz BPF
1.6MHz LPF
4.43MHz BPF
FL8007
4.8MHz BPF
1.6MHz LPF
QR8007 MRN1403
Q8024 MSD601
REF. NO. 8000 SERIES


IC8001
VEF-H04F
M51426FP
TP8004
TP8002
TPG8001
P8001
SW5V
HSS
PLAY 5V
TRICK(H)
TRICK(L)
COMPEL B/W(L)
COMPEL COLOR(H)
OSD OUT
ROTARY SW
COLOR(H)
YNR OUT
DOC
PB NG(H)
P1002-4,5 (TO POWER (1))
P3001-21B (TO VIDEO (3))
P3001-9B (TO VIDEO (3))
P3001-19B (TO VIDEO (3))
P2002-3 (TO SERVO)
P2002-4
P3001-14A (TO VIDEO (3))
P2002-9 (TO SERVO)
P3001-10A (TO VIDEO (3))
P3001-17A
P3001-9A
P6002-23A (TO SYSTEM CTL)
MOTHER
NOT USED
Y BALANCE
PB CHROMA
FL8001 VLF0727
FL8004 VLD0147
FL8005
FL8002
FL8003
FL8006 VLF0299-1
5.06MHz BPF
1.6MHz LPF
4.43MHz BPF
FL8007
4.8MHz BPF
1.6MHz LPF
QR8010 XN1213
QR8011 XN1213
QR8007 MRN1403
DR8005 MRN1404
5 6 7 8 9 10 11 12

REF. NO. 8000 SERIES

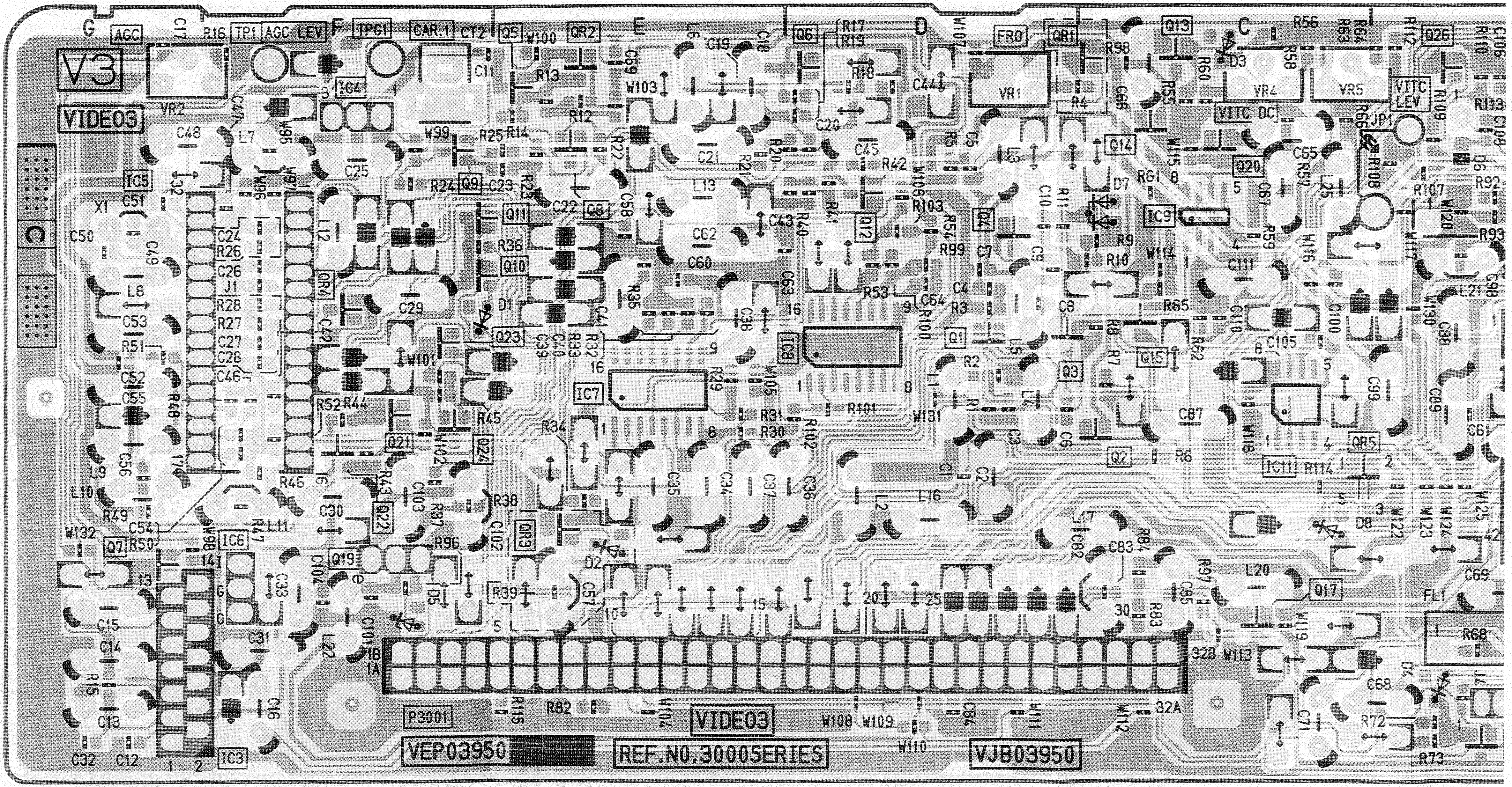


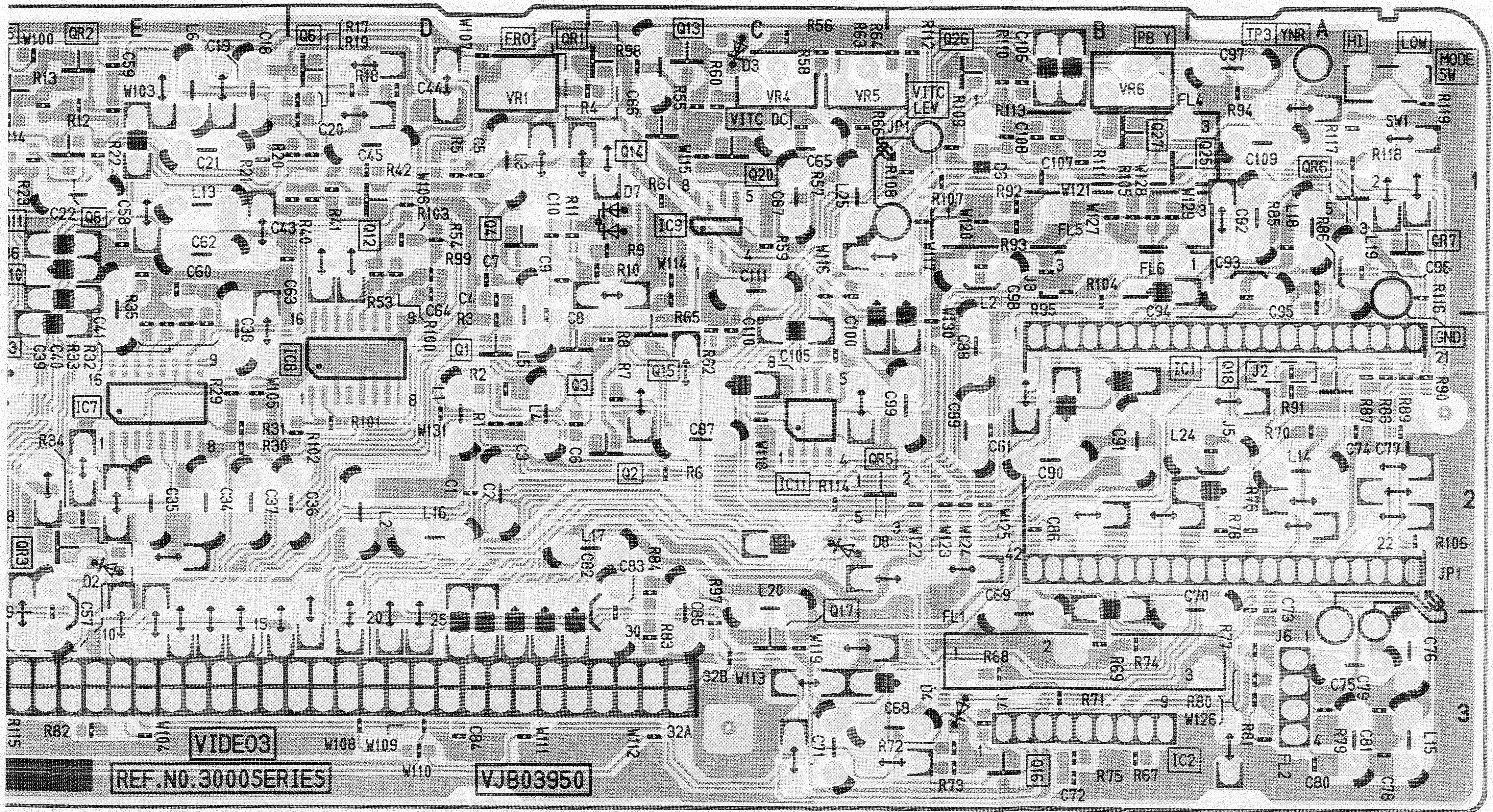
TP8001 5.0Vp-p PLAY

TP8004 0.4Vp-p PLAY

VIDEO (3) C.B.A. (VEP03950B)

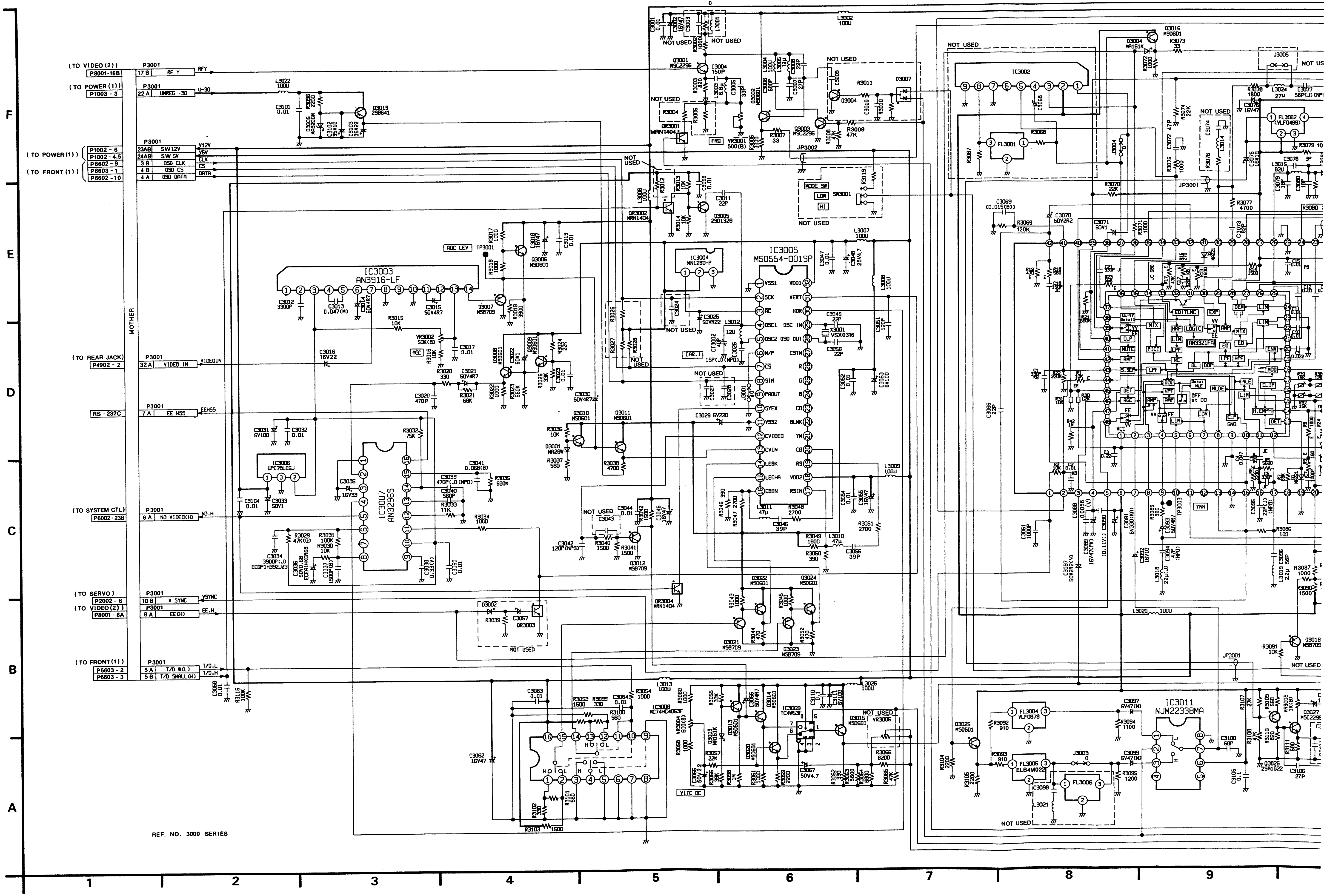
VIDEO (3) C.B.A. (VEP03950B)

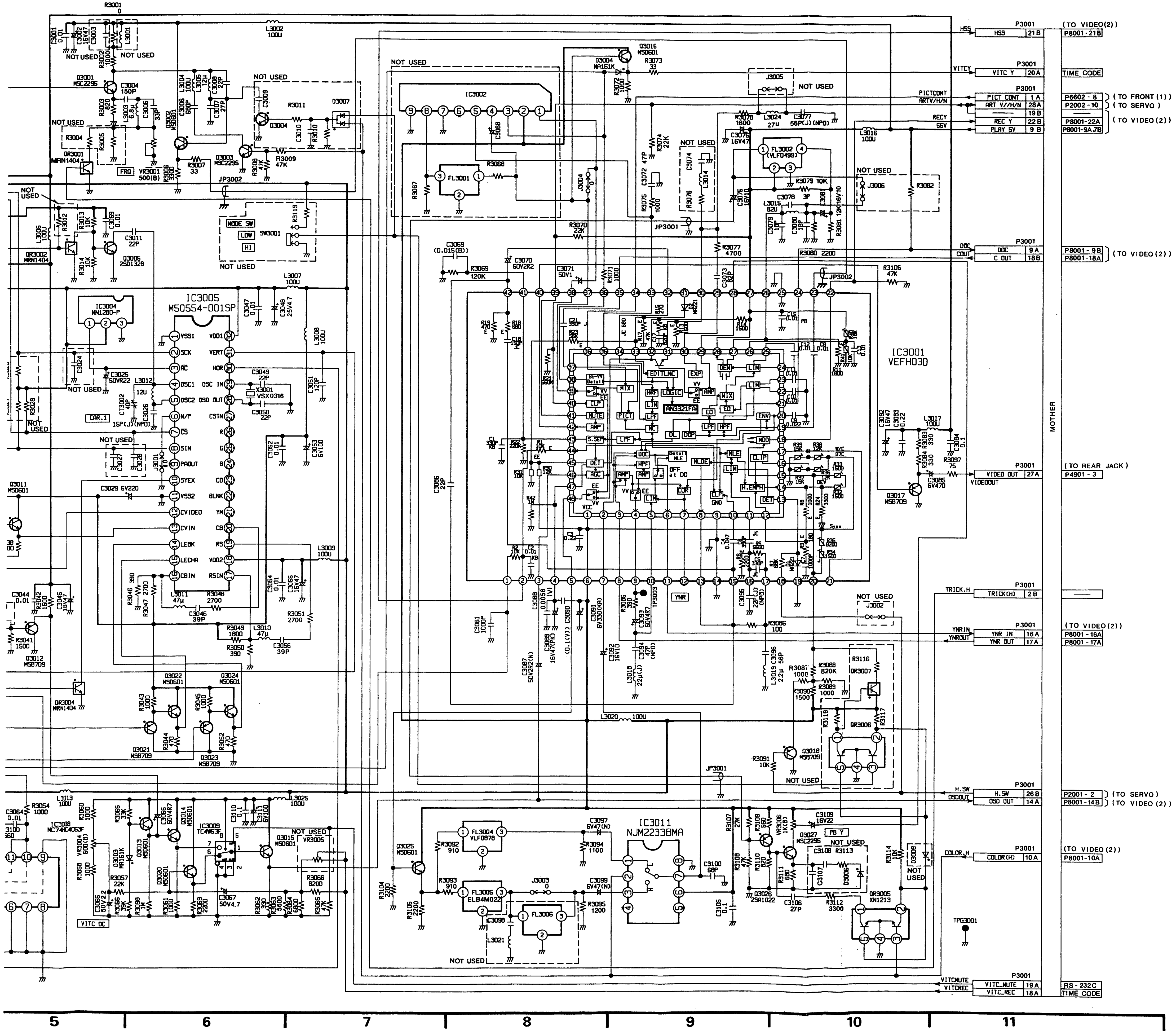

V3
VIDEO3
G
F
E
D
C
P3001
VEP03950
REF.NO.3000SERIES
VJB03950
VIDEO3


VIDEO3
REF.NO.3000SERIES
VJB03950
A
B
C
D
E
1
2
3
HI
LOW
MODE SW
GND
TP3
YNR
PB Y
VITC LEV
VITC DC
VR1
VR4
VR5
VR6
FRO
IC1
IC2
IC7
IC8
IC9
IC11
JP1
SW1
J6

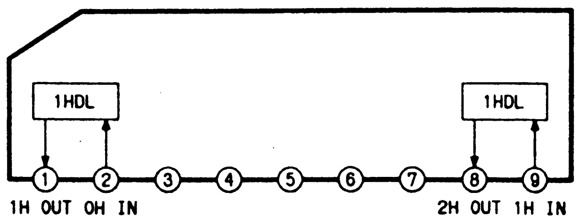
(FOIL SIDE)

VIDEO (3) SCHEMATIC DIAGRAM

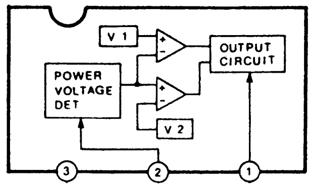

(TO VIDEO (2))
P8001-16B
P3001
17 B
RF Y
RFY
(TO POWER (1))
P1003 - 3
22 A
UNREG -30
U-30
(TO POWER (1))
P1002 - 6
P1002 - 4,5
P6602 - 9
(TO FRONT (1))
P6603 - 1
P6602 - 10
23AB SW12V
24AB SW 5V
3 B OSD CLK
4 B OSD CS
4 A OSD DATA
V12V
V5V
CLK
CS
DATA
MOTHER
(TO REAR JACK)
P4902 - 2
32 A VIDEO IN
VIDEOIN
RS - 232C
7 A EE HSS
EEHSS
(TO SYSTEM CTL)
P6002-23B
6 A NO VIDEO(H)
NO.H
(TO SERVO)
P2002 - 6
10 B V SYNC
VSYNC
(TO VIDEO (2))
P8001 - 8A
8 A EE(H)
EE.H
(TO FRONT (1))
P6603 - 2
P6603 - 3
5 A T/D W(L)
5 B T/D SMALL(H)
T/D.L
T/D.H
IC3003
AN3916-LF
IC3005
M50554-001SP
IC3004
MN1280-P
IC3006
UPC78L05J
IC3007
AN3296S
IC3002
IC3008
MC74HC4053F
IC3009
TC4W53F
IC3011
NJM2233BMA
AN3321FA
AGC LEV
TP3001
MODE SW
LOW
HI
SW3001
VITC DC
CAR.1
NOT USED
REF. NO. 3000 SERIES
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9


IC3001 VEFH03D
IC3002
IC3005 M50554-001SP
IC3004 MN1280-P
IC3011 NJM2233BMA
IC3008 MC74HC4053F
IC3009 TC4W53F
P3001
HSS 21B (TO VIDEO(2)) P8001-21B
VITC Y 20A TIME CODE
PICT CONT 1A P6602-8 (TO FRONT(1))
ART V/H/N 28A P2002-10 (TO SERVO)
19B
REC Y 22B P8001-22A (TO VIDEO(2))
PLAY 5V 9B P8001-9A,7B
DOC 9A P8001-9B (TO VIDEO(2))
C OUT 18B P8001-18A
VIDEO OUT 27A (TO REAR JACK) P4901-3
TRICK(H) 2B
YNR IN 16A (TO VIDEO(2)) P8001-16A
YNR OUT 17A P8001-17A
H.SW 26B P2001-2 (TO SERVO)
OSD OUT 14A P8001-14B (TO VIDEO(2))
COLOR(H) 10A (TO VIDEO(2)) P8001-10A
VITC_MUTE 19A RS-232C
VITC_REC 18A TIME CODE
MOTHER
NOT USED
MODE SW LOW HI SW3001
TPG3001
5
6
7
8
9
10
11

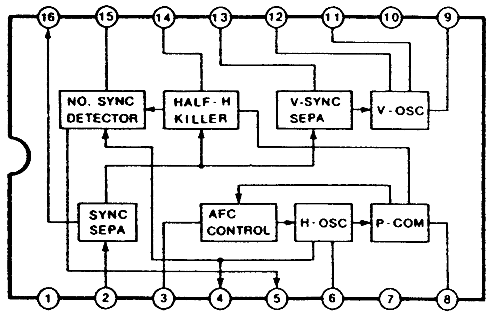
IC3002 VCR0299

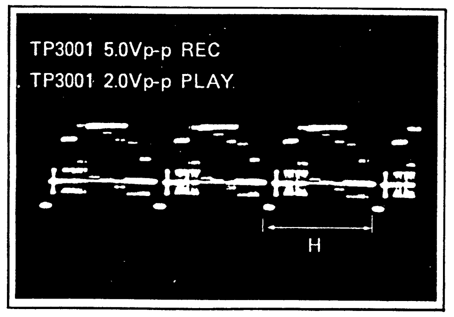

1HDL
1HDL
1
2
3
4
5
6
7
8
9
1H OUT 0H IN
2H OUT 1H IN

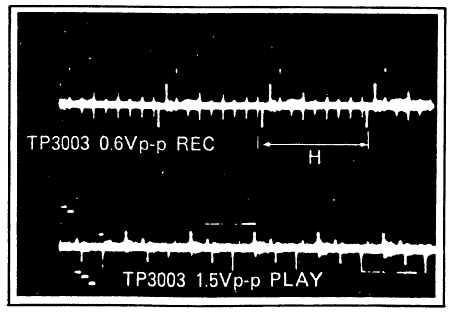
IC3004 MN1280-P


V1
POWER VOLTAGE DET
OUTPUT CIRCUIT
V2
3
2
1

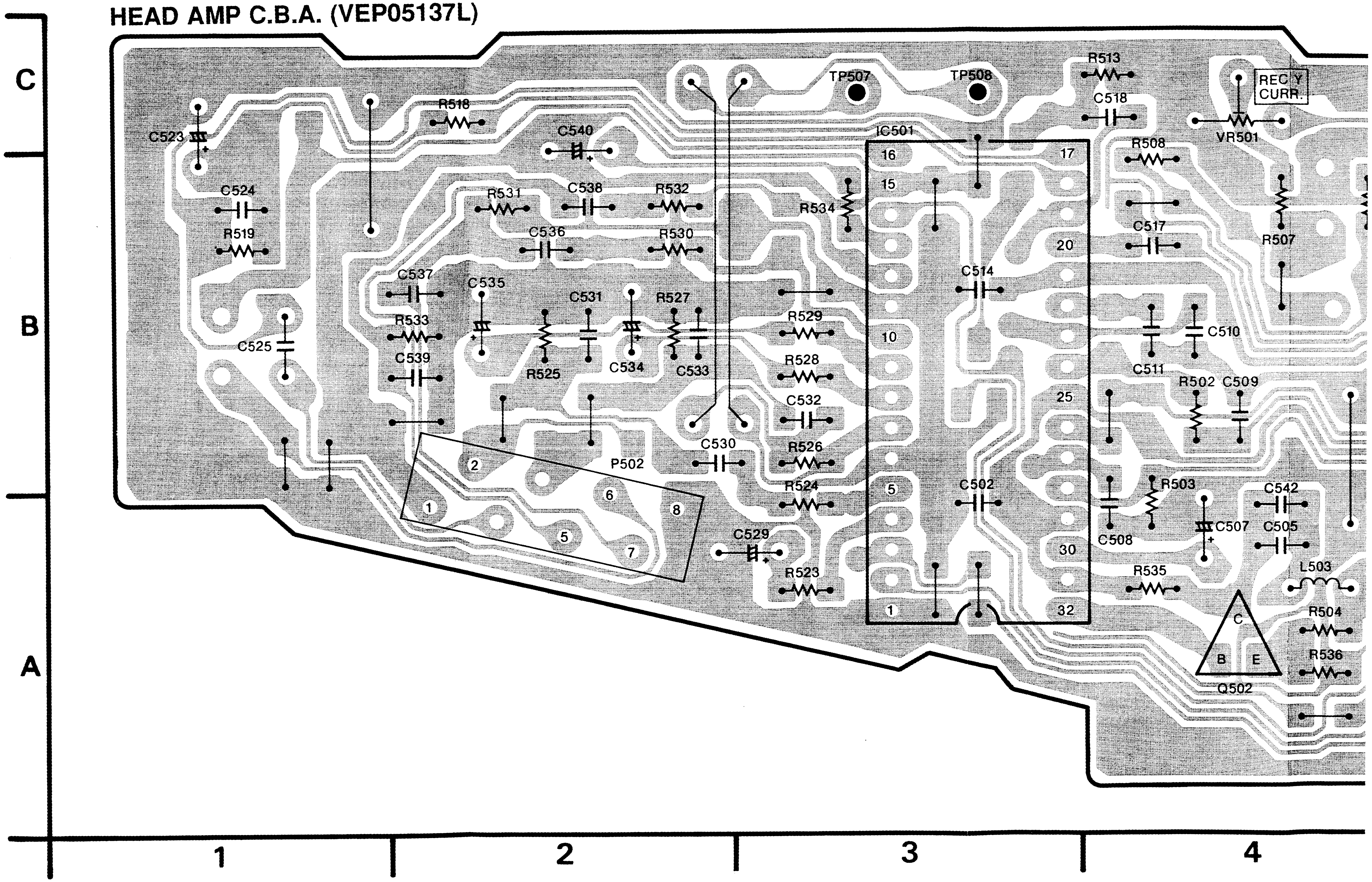
IC3007 AN3296S

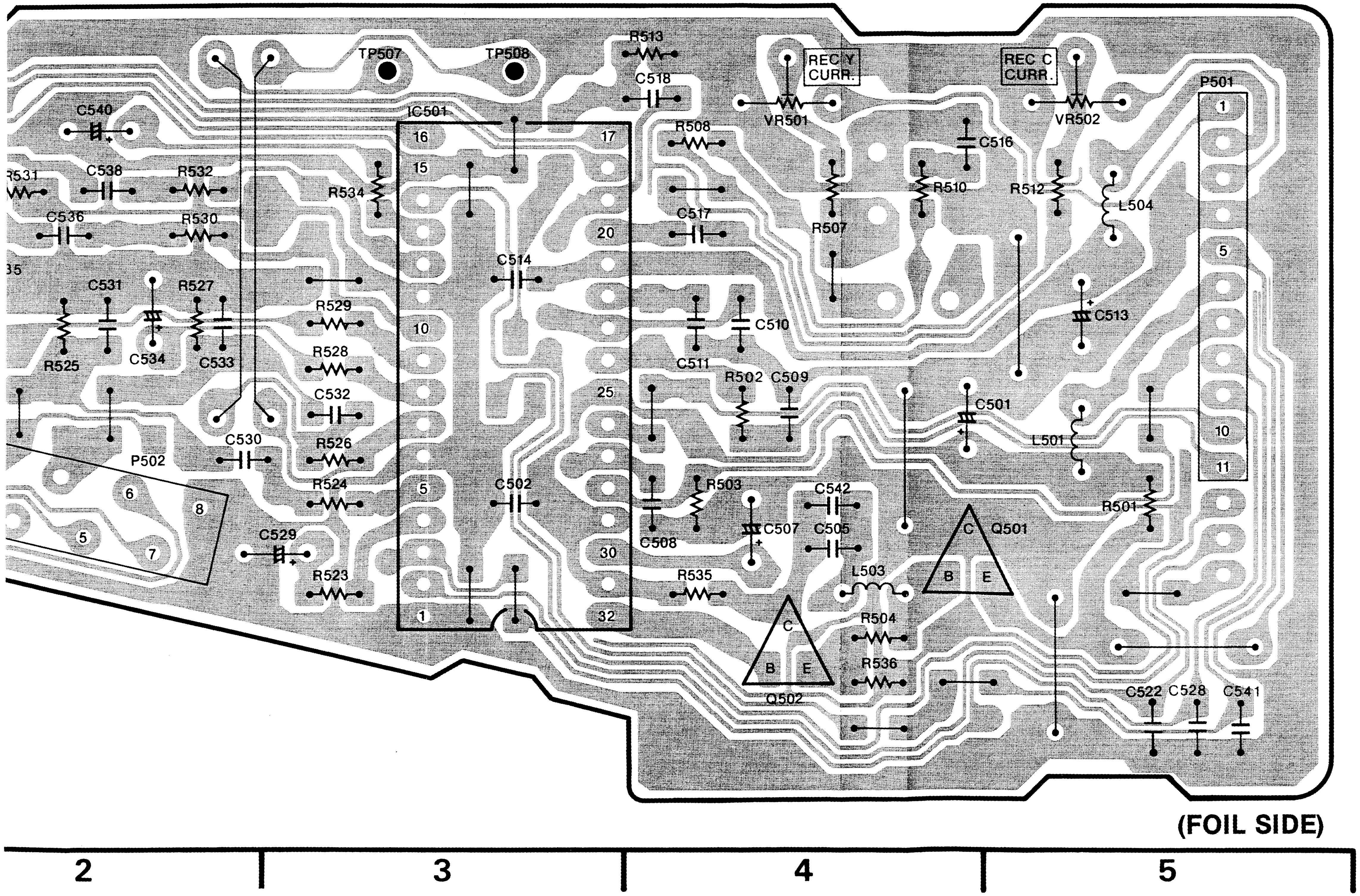

16
15
14
13
12
11
10
9
NO. SYNC DETECTOR
HALF-H KILLER
V-SYNC SEPA
V-OSC
SYNC SEPA
AFC CONTROL
H-OSC
P-COM
1
2
3
4
5
6
7
8





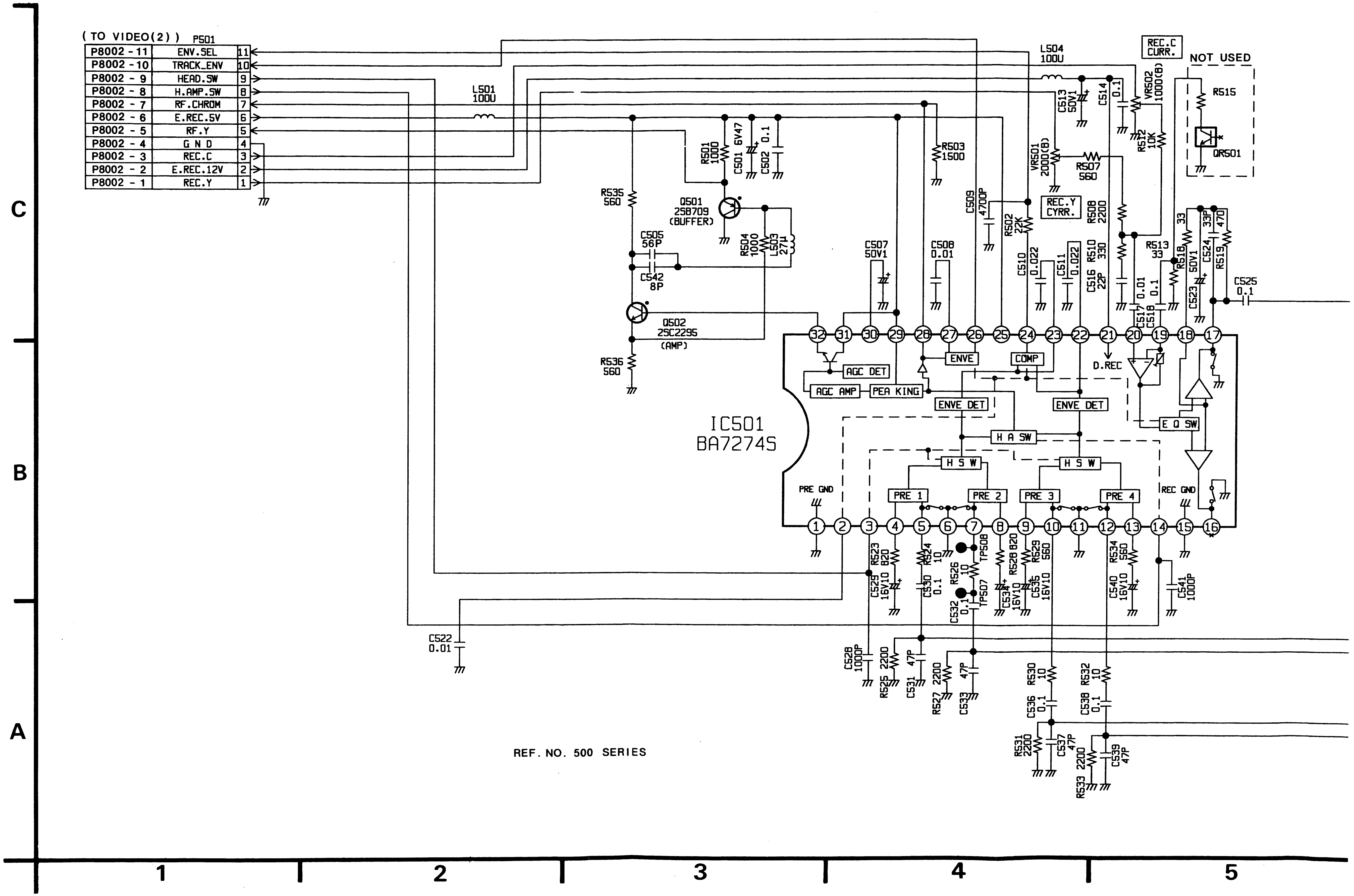
HEAD AMP C.B.A. (VEP05137L)


HEAD AMP C.B.A. (VEP05137L)
C
B
A
1
2
3
4
C523
R518
C540
TP507
TP508
R513
C518
REC Y CURR.
VR501
IC501
16
17
15
C524
R531
C538
R532
R534
R508
R519
C536
R530
C517
20
R507
C537
C535
C514
C531
R527
R529
C510
R533
10
C525
C539
R525
C534
C533
R528
C511
R502
C509
25
C532
2
P502
C530
R526
1
6
8
5
7
R524
5
C502
R503
C542
C508
C507
C505
C529
30
R523
R535
L503
1
32
C
R504
B
E
R536
Q502

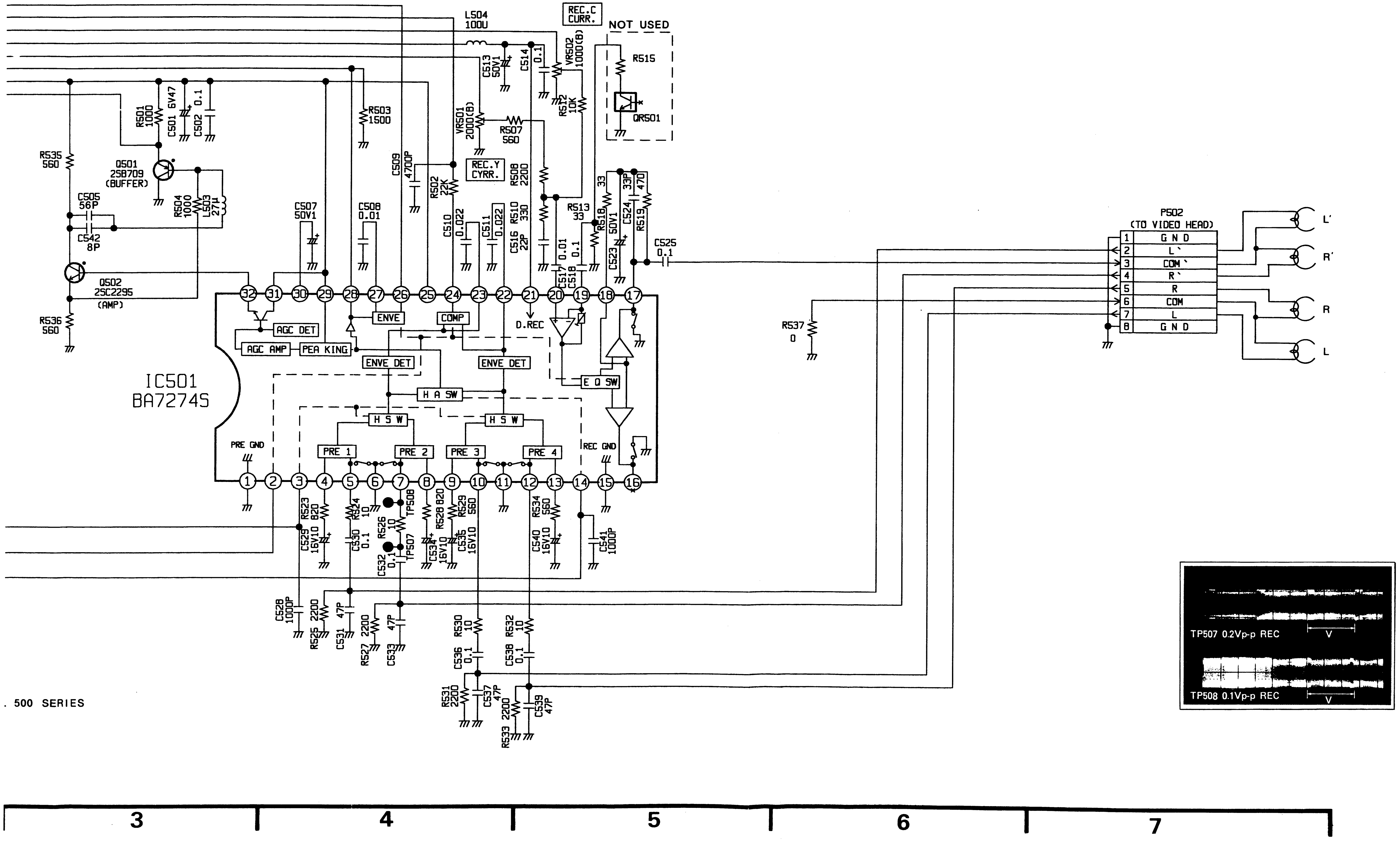

TP507
TP508
R513
C518
REC Y CURR.
REC C CURR.
VR501
VR502
P501
1
5
10
11
IC501
16
15
17
20
10
25
5
30
1
32
C540
R531
C538
R532
C536
R530
35
C531
R527
C534
C533
R525
R534
R529
R528
C532
C530
R526
R524
P502
6
8
5
7
C529
R523
C514
C502
R508
C517
R507
R510
C516
R512
L504
C513
C511
C510
R502
C509
C501
L501
R503
C508
C507
C542
C505
L503
Q501
C
B
E
R501
R535
R504
R536
Q502
C522
C528
C541
2
3
4
5

(FOIL SIDE)

HEAD AMP SCHEMATIC DIAGRAM

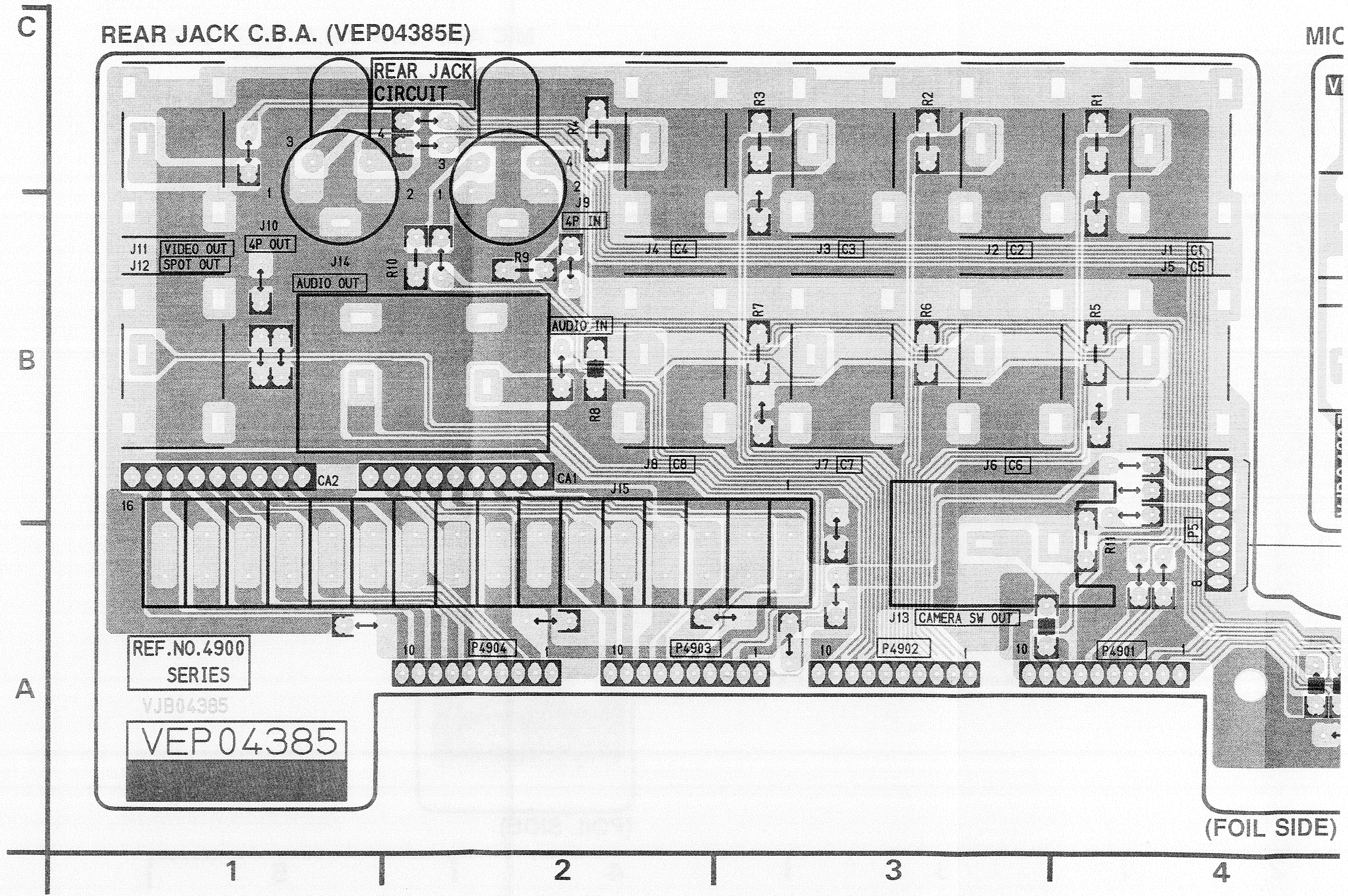

(TO VIDEO(2))
P501
P8002 - 11 ENV.SEL 11
P8002 - 10 TRACK_ENV 10
P8002 - 9 HEAD.SW 9
P8002 - 8 H.AMP.SW 8
P8002 - 7 RF.CHROM 7
P8002 - 6 E.REC.5V 6
P8002 - 5 RF.Y 5
P8002 - 4 G N D 4
P8002 - 3 REC.C 3
P8002 - 2 E.REC.12V 2
P8002 - 1 REC.Y 1
L501 100U
L504 100U
R501 1000
C501 6V47
C502 0.1
R503 1500
R535 560
Q501 2SB709 (BUFFER)
C505 56P
C542 8P
R504 1000
L503 27U
Q502 2SC2295 (AMP)
R536 560
C507 50V1
C508 0.01
C509 4700P
R502 22K
VR501 2000(B)
C510 0.022
C511 0.022
REC.Y CYRR.
C513 50V1
C514 0.1
VR502 1000(B)
REC.C CURR.
R512 10K
R507 560
R508 2200
R510 330
C516 22P
C517 0.01
C518 0.1
R513 33
R518 33
C523 50V1
C524 33P
R519 470
C525 0.1
NOT USED
R515
QR501
IC501
BA7274S
AGC DET
AGC AMP
PEA KING
ENVE
COMP
ENVE DET
ENVE DET
D.REC
H A SW
E Q SW
H S W
H S W
PRE 1
PRE 2
PRE 3
PRE 4
PRE GND
REC GND
R523 820
C529 16V10
R524 10
C530 0.1
R526 10
TP508
TP507
C532 0.1
R528 820
C534 16V10
R529 560
C535 16V10
R534 560
C540 16V10
C541 1000P
C522 0.01
C528 1000P
R525 2200
C531 47P
R527 2200
C533 47P
R530 10
C536 0.1
R532 10
C538 0.1
R531 2200
C537 47P
R533 2200
C539 47P
C
B
A
1
2
3
4
5

REF. NO. 500 SERIES

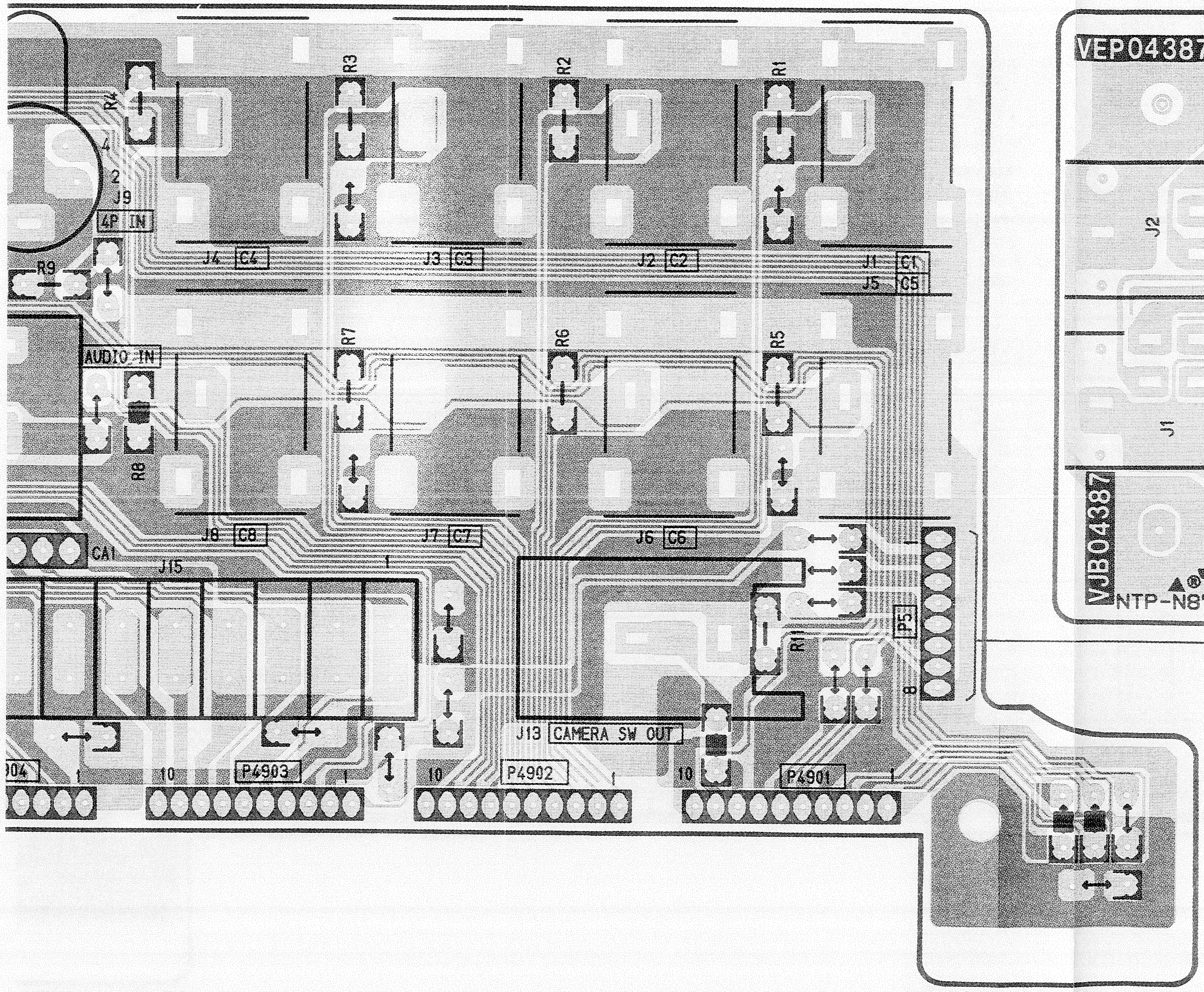

L504
100U
REC.C
CURR.
NOT USED
R515
QR501
VR502
1000(B)
R512
10K
C513
50V1
C514
0.1
VR501
2000(B)
R507
560
REC.Y
CYRR.
R508
2200
R510
330
R513
33
R501
1000
C501 6V47
C502 0.1
R503
1500
R535
560
Q501
2SB709
(BUFFER)
R504
1000
L503
27µ
C505
56P
C542
8P
Q502
2SC2295
(AMP)
R536
560
C507
50V1
C508
0.01
C509
4700P
R502
22K
C510
0.022
C511
0.022
C516
22P
C517
0.01
C518
0.1
R518
33
C523
50V1
C524
33P
R519
470
C525
0.1
D.REC
AGC DET
AGC AMP
PEA KING
ENVE
COMP
ENVE DET
ENVE DET
H A SW
E Q SW
H S W
H S W
PRE 1
PRE 2
PRE 3
PRE 4
PRE GND
REC GND
IC501
BA7274S
R537
0
P502
(TO VIDEO HEAD)
1 G N D
2 L`
3 COM`
4 R`
5 R
6 COM
7 L
8 G N D
L'
R'
R
L
R523 820
C529 16V10
C530 0.1
R524 10
TP508
R526 10
TP507
C532 0.1
C534 16V10
R528 820
R529 560
C535 16V10
R534 560
C540 16V10
C541 1000P
C528 1000P
R525 2200
C531 47P
R527 2200
C533 47P
R530 10
C536 0.1
R532 10
C538 0.1
R531 2200
C537 47P
R533 2200
C539 47P
TP507 0.2Vp-p REC
V
TP508 0.1Vp-p REC
V
3
4
5
6
7

. 500 SERIES

REAR JACK C.B.A. (VEP04385E) AND MIC AMP SUB C.B.A. (VEP04387A)

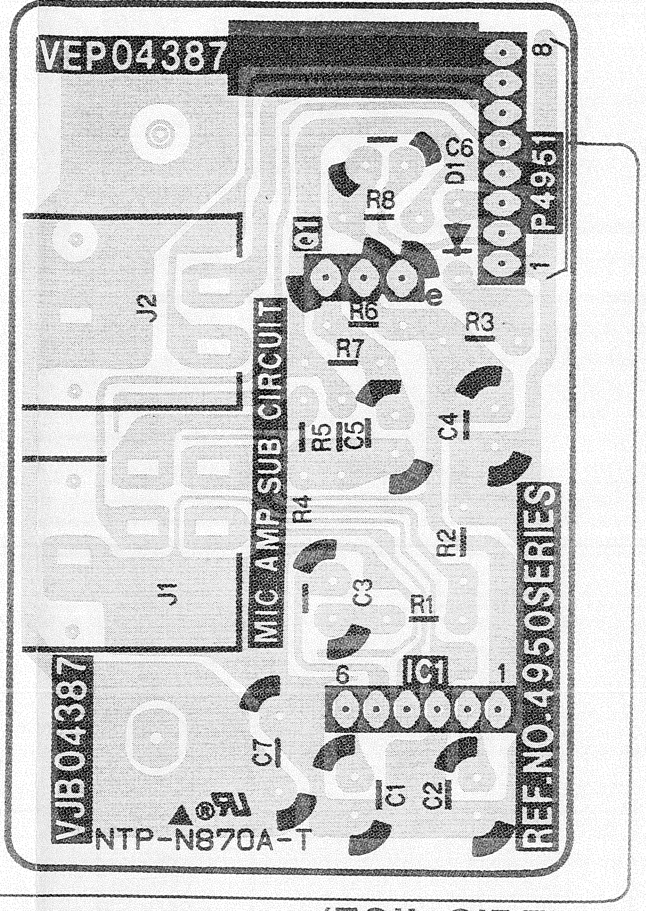

C
B
A
1
2
3
4
REAR JACK C.B.A. (VEP04385E)
MIC
REAR JACK CIRCUIT
J11 VIDEO OUT
J12 SPOT OUT
J10 4P OUT
J14 AUDIO OUT
J9 4P IN
AUDIO IN
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
J1 C1
J2 C2
J3 C3
J4 C4
J5 C5
J6 C6
J7 C7
J8 C8
CA1
CA2
J15
P5
J13 CAMERA SW OUT
P4901
P4902
P4903
P4904
REF.NO.4900 SERIES
VJB04385
VEP04385
(FOIL SIDE)

AMP SUB C.B.A. (VEP04387A)


R4
R3
R2
R1
J9
4P IN
J4 C4
J3 C3
J2 C2
J1 C1
J5 C5
R9
R7
R6
R5
AUDIO IN
R8
J8 C8
J7 C7
J6 C6
CA1
J15
P5
R11
8
J13 CAMERA SW OUT
P4903
P4902
P4901
10
1

(FOIL SIDE)

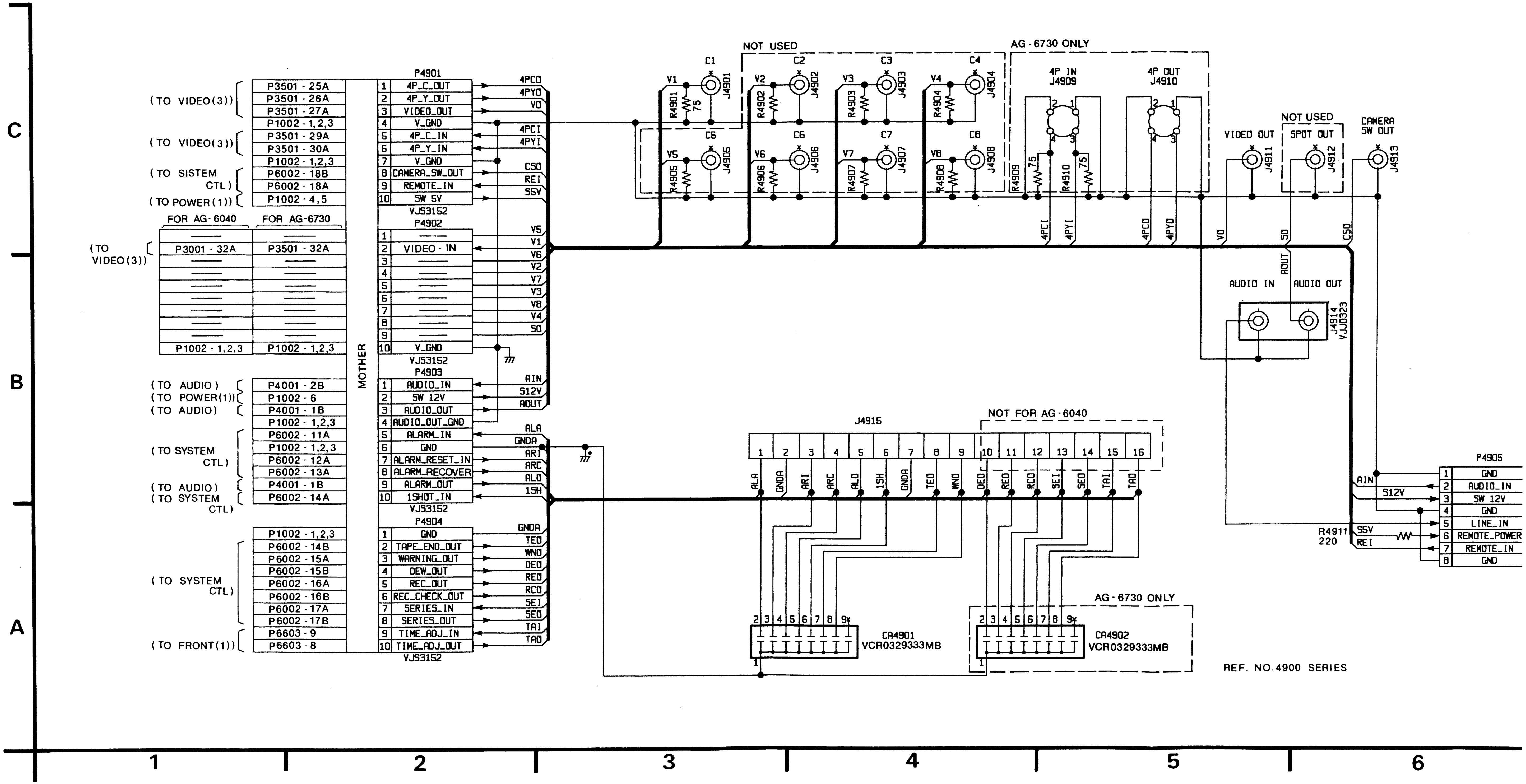
MIC AMP SUB C.B.A. (VEP04387A)


VEP04387
8
C6
D1
R8
P4951
1
Q1
R6
R7
R3
J2
MIC AMP SUB CIRCUIT
R5
C5
C4
R4
R2
REF.NO.4950SERIES
J1
C3
R1
IC1
6
1
C7
VJB04387
C1
C2
NTP-N870A-T

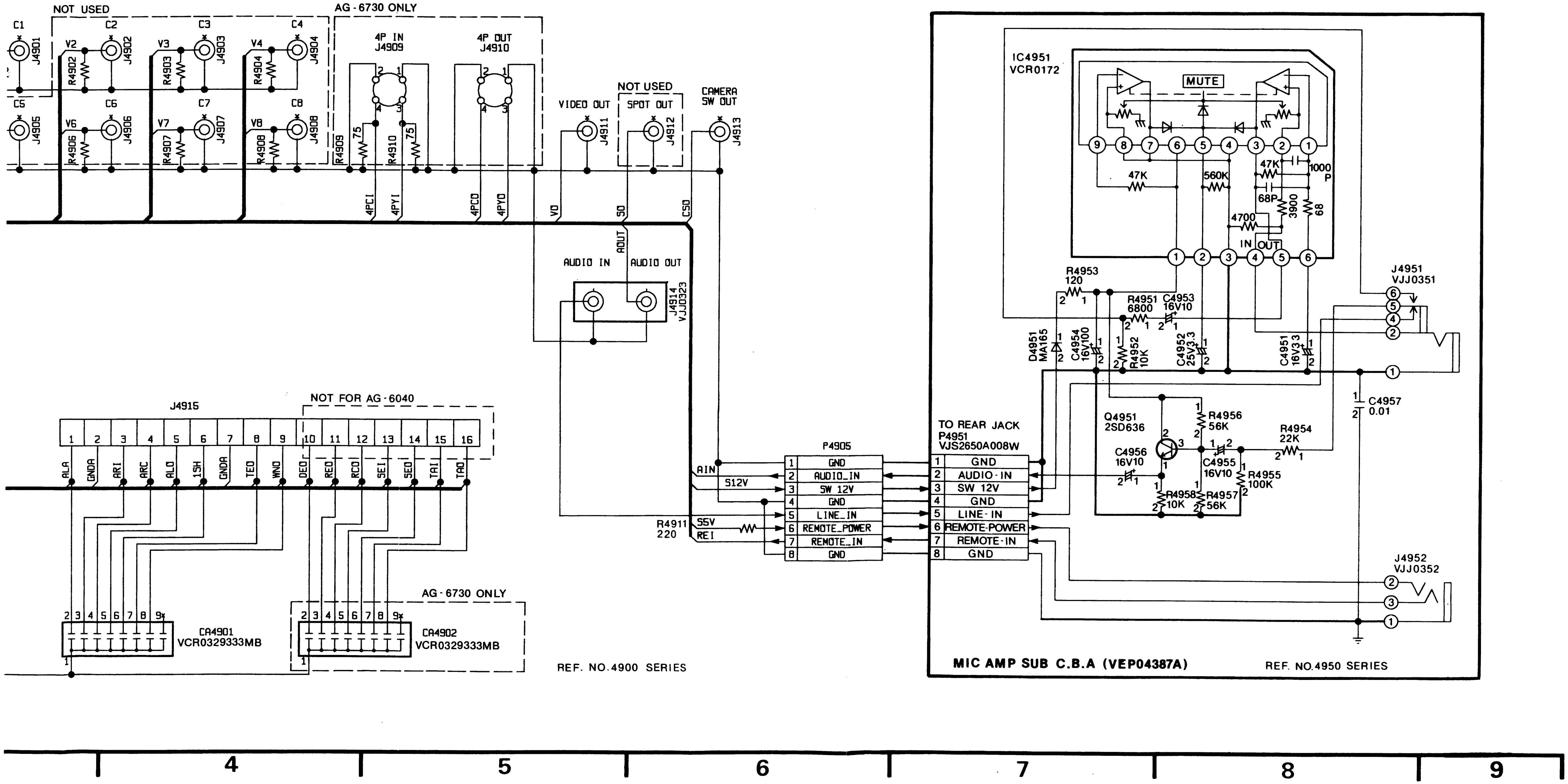
(FOIL SIDE)

2 3 4 5

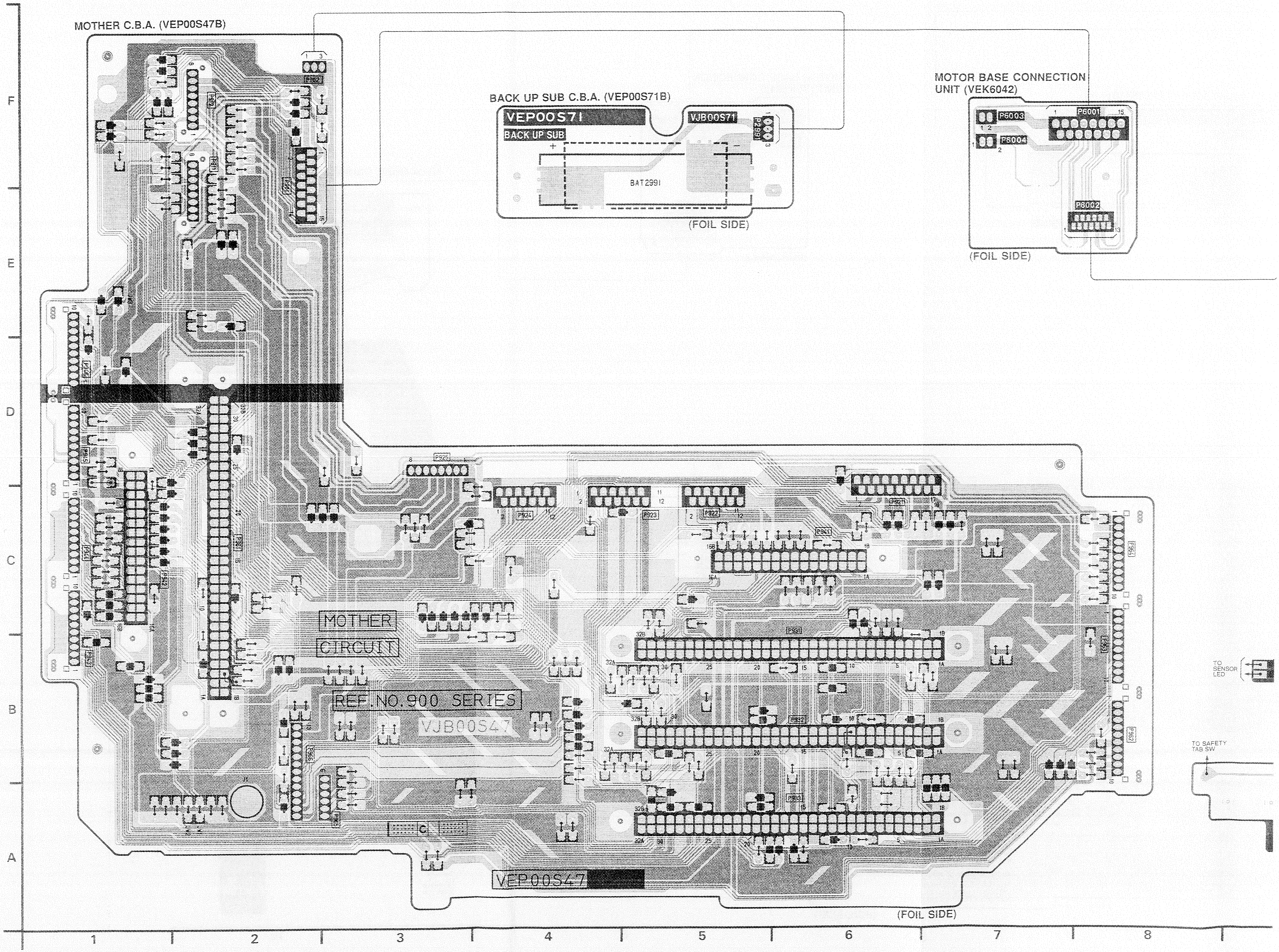
REAR JACK SCHEMATIC DIAGRAM



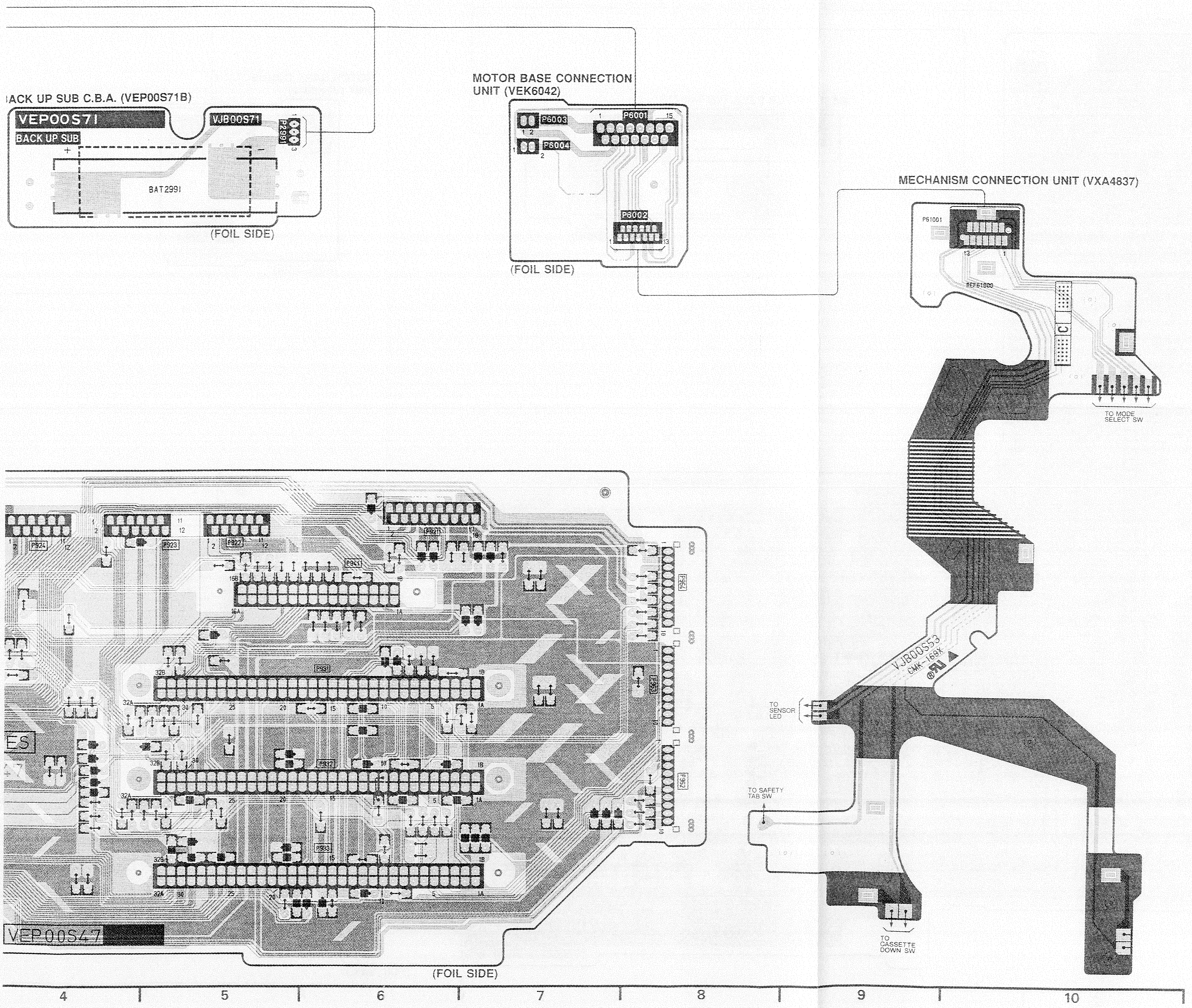
C
B
A
1
2
3
4
5
6
(TO VIDEO(3))
P3501 - 25A
P3501 - 26A
P3501 - 27A
P1002 - 1,2,3
(TO VIDEO(3))
P3501 - 29A
P3501 - 30A
P1002 - 1,2,3
(TO SISTEM CTL)
P6002 - 18B
P6002 - 18A
(TO POWER(1))
P1002 - 4,5
FOR AG-6040
FOR AG-6730
(TO VIDEO(3))
P3001 - 32A
P3501 - 32A
P1002 - 1,2,3
P1002 - 1,2,3
(TO AUDIO)
P4001 - 2B
(TO POWER(1))
P1002 - 6
(TO AUDIO)
P4001 - 1B
P1002 - 1,2,3
(TO SYSTEM CTL)
P6002 - 11A
P1002 - 1,2,3
P6002 - 12A
P6002 - 13A
(TO AUDIO)
P4001 - 1B
(TO SYSTEM CTL)
P6002 - 14A
P1002 - 1,2,3
(TO SYSTEM CTL)
P6002 - 14B
P6002 - 15A
P6002 - 15B
P6002 - 16A
P6002 - 16B
P6002 - 17A
P6002 - 17B
(TO FRONT(1))
P6603 - 9
P6603 - 8
MOTHER
P4901
1 4P_C_OUT
2 4P_Y_OUT
3 VIDEO_OUT
4 V_GND
5 4P_C_IN
6 4P_Y_IN
7 V_GND
8 CAMERA_SW_OUT
9 REMOTE_IN
10 SW 5V
VJS3152
P4902
1 ———
2 VIDEO - IN
3 ———
4 ———
5 ———
6 ———
7 ———
8 ———
9 ———
10 V_GND
VJS3152
P4903
1 AUDIO_IN
2 SW 12V
3 AUDIO_OUT
4 AUDIO_OUT_GND
5 ALARM_IN
6 GND
7 ALARM_RESET_IN
8 ALARM_RECOVER
9 ALARM_OUT
10 1SHOT_IN
VJS3152
P4904
1 GND
2 TAPE_END_OUT
3 WARNING_OUT
4 DEW_OUT
5 REC_OUT
6 REC_CHECK_OUT
7 SERIES_IN
8 SERIES_OUT
9 TIME_ADJ_IN
10 TIME_ADJ_OUT
VJS3152
4PCO
4PYO
VO
4PCI
4PYI
CSO
REI
S5V
V5
V1
V6
V2
V7
V3
V8
V4
SO
AIN
S12V
AOUT
ALA
GNDA
ARI
ARC
ALO
1SH
GNDA
TEO
WNO
DEO
REO
RCO
SEI
SEO
TAI
TAO
NOT USED
C1
C2
C3
C4
C5
C6
C7
C8
V1
V2
V3
V4
V5
V6
V7
V8
J4901
J4902
J4903
J4904
J4905
J4906
J4907
J4908
R4901 75
R4902
R4903
R4904
R4905
R4906
R4907
R4908
AG-6730 ONLY
4P IN J4909
4P OUT J4910
R4909
R4910
75
75
4PCI
4PYI
4PCO
4PYO
NOT USED
VIDEO OUT
SPOT OUT
CAMERA SW OUT
J4911
J4912
J4913
VO
SO
CSO
AOUT
AUDIO IN
AUDIO OUT
J4914 VJJ0323
J4915
NOT FOR AG-6040
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
ALA
GNDA
ARI
ARC
ALO
1SH
GNDA
TEO
WNO
DEO
REO
RCO
SEI
SEO
TAI
TAO
AG-6730 ONLY
2 3 4 5 6 7 8 9
1
CA4901 VCR0329333MB
2 3 4 5 6 7 8 9
1
CA4902 VCR0329333MB
REF. NO.4900 SERIES
P4905
AIN
S12V
R4911 220
S5V
REI
1 GND
2 AUDIO_IN
3 SW 12V
4 GND
5 LINE_IN
6 REMOTE_POWER
7 REMOTE_IN
8 GND


NOT USED
AG-6730 ONLY
C1
C2
C3
C4
C5
C6
C7
C8
J4901
J4902
J4903
J4904
J4905
J4906
J4907
J4908
V2
V3
V4
V6
V7
V8
R4902
R4903
R4904
R4906
R4907
R4908
R4909
R4910
75
4P IN
J4909
4P OUT
J4910
VIDEO OUT
J4911
NOT USED
SPOT OUT
J4912
CAMERA SW OUT
J4913
4PCI
4PYI
4PCO
4PYO
VO
SO
CSO
AOUT
AUDIO IN
AUDIO OUT
J4914
VJJ0323
J4915
NOT FOR AG-6040
ALA
GNDA
ARI
ARC
ALO
ISH
GNDA
TEO
WNO
DEO
REO
RCO
SEI
SEO
TAI
TAO
CA4901
VCR0329333MB
CA4902
VCR0329333MB
AG-6730 ONLY
P4905
1 GND
2 AUDIO_IN
3 SW 12V
4 GND
5 LINE_IN
6 REMOTE_POWER
7 REMOTE_IN
8 GND
AIN
S12V
SSV
REI
R4911
220
REF. NO.4900 SERIES
IC4951
VCR0172
MUTE
47K
560K
47K
1000P
68P
3900
68
4700
IN
OUT
R4953
120
R4951
6800
C4953
16V10
D4951
MA165
C4954
16V100
R4952
10K
C4952
25V3.3
C4951
16V33
J4951
VJJ0351
C4957
0.01
TO REAR JACK
P4951
VJS2650A008W
1 GND
2 AUDIO-IN
3 SW 12V
4 GND
5 LINE-IN
6 REMOTE-POWER
7 REMOTE-IN
8 GND
Q4951
2SD636
R4956
56K
C4956
16V10
C4955
16V10
R4954
22K
R4955
100K
R4958
10K
R4957
56K
J4952
VJJ0352
MIC AMP SUB C.B.A (VEP04387A)
REF. NO.4950 SERIES
4
5
6
7
8
9

MOTHER C.B.A. (VEP00S47B), BACK UP SUB C.B.A. (VEP00S71B), MORTOR BASE CONNECTION UNIT (VEK6042) AND


MOTHER C.B.A. (VEP00S47B)
BACK UP SUB C.B.A. (VEP00S71B)
VEP00S71
BACK UP SUB
VJB00S71
P2991
BAT2991
(FOIL SIDE)
MOTOR BASE CONNECTION UNIT (VEK6042)
P6001
P6002
P6003
P6004
(FOIL SIDE)
MOTHER
CIRCUIT
REF.NO.900 SERIES
VJB00S47
VEP00S47
P925
P924
P923
P922
P921
P941
P931
P932
P933
P981
P962
P963
P964
P965
P966
TO SENSOR LED
TO SAFETY TAB SW
(FOIL SIDE)
F
E
D
C
B
A
1
2
3
4
5
6
7
8

C.B.A. (VEP00S71B), MORTOR BASE CONNECTION UNIT (VEK6042) AND MECHANISM CONNECTION UNIT (VXA4837)

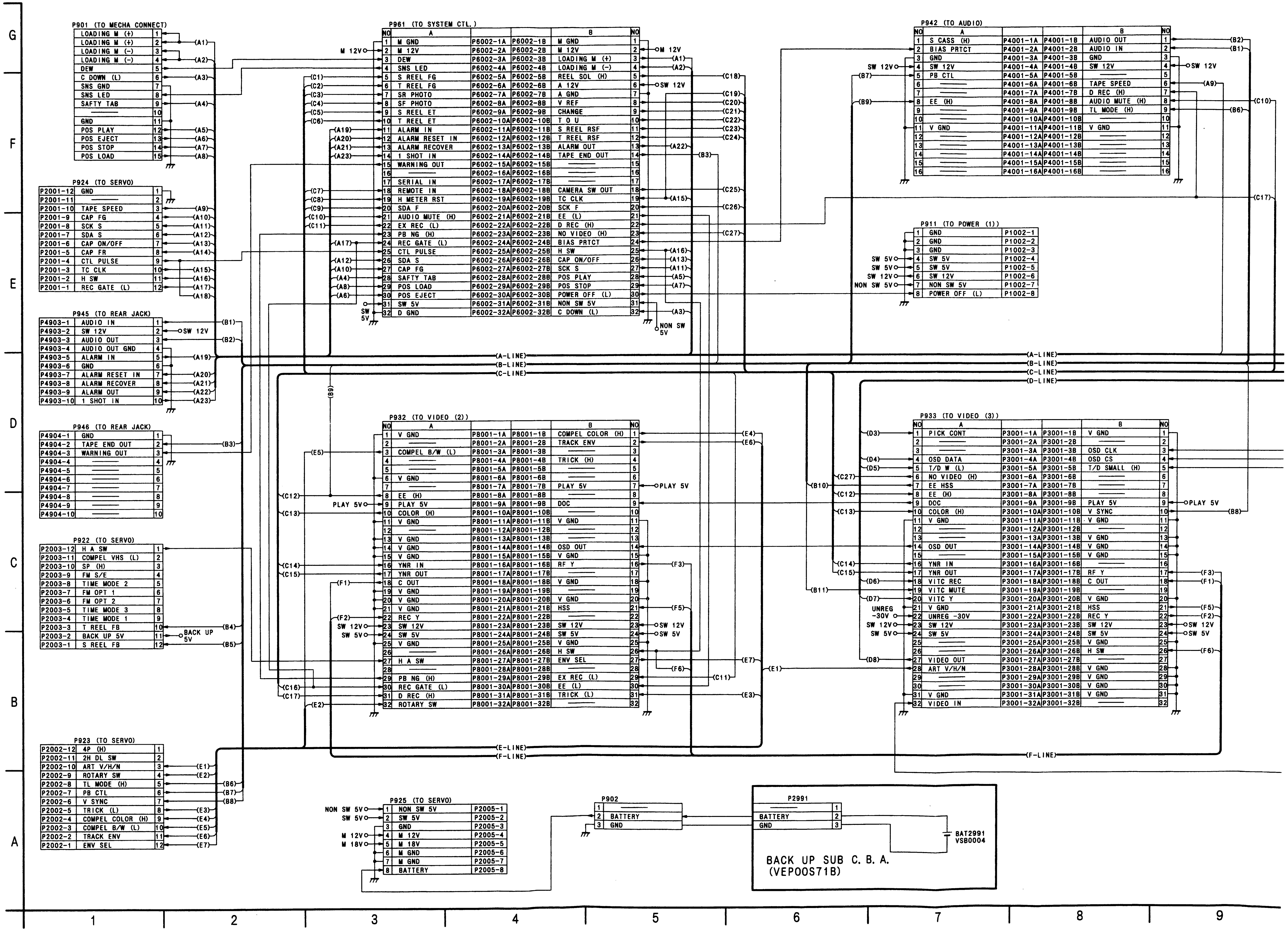

BACK UP SUB C.B.A. (VEP00S71B)

MOTOR BASE CONNECTION UNIT (VEK6042)

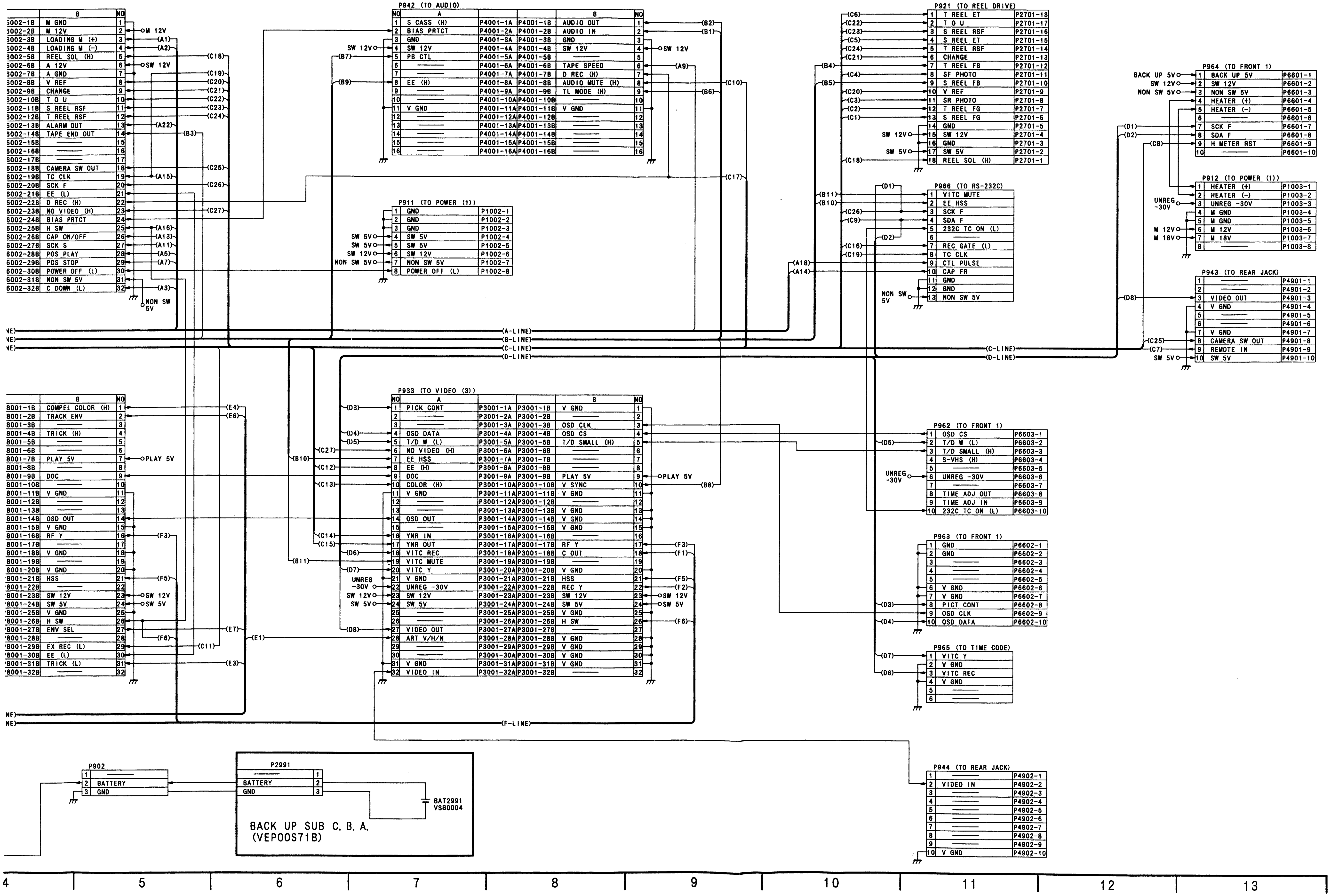
MECHANISM CONNECTION UNIT (VXA4837)

VEP00S71
BACK UP SUB
VJB00S71
P2991
BAT2991
(FOIL SIDE)
P6003
P6004
P6001
P6002
1
15
13
(FOIL SIDE)
P61001
TO MODE SELECT SW
VJB00S53
CMK-169X
TO SENSOR LED
TO SAFETY TAB SW
TO CASSETTE DOWN SW
P924
P923
P922
P921
P931
P932
P933
P951
P952
P953
VEP00S47
(FOIL SIDE)
4
5
6
7
8
9
10

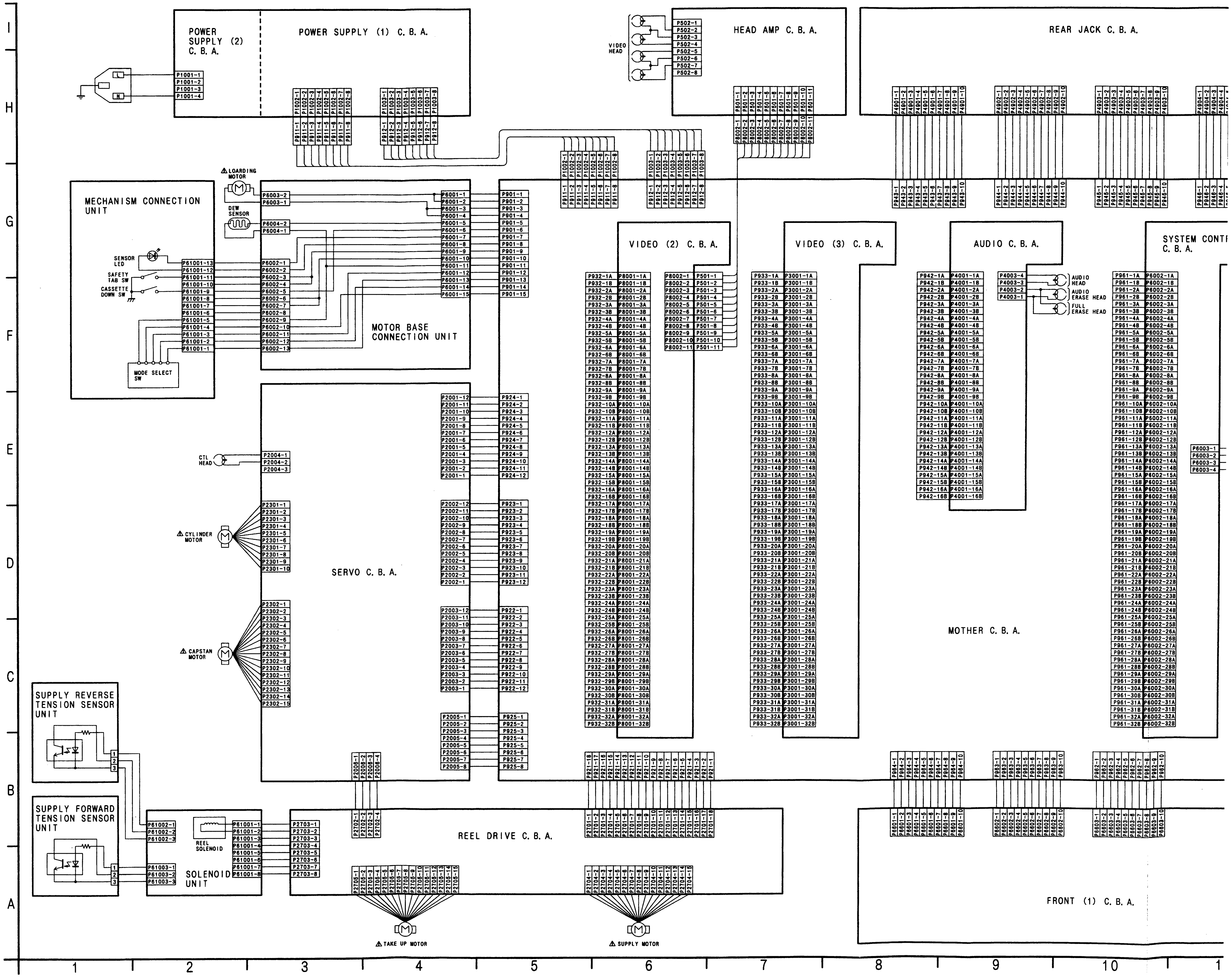
MOTHER SCHEMATIC DIAGRAM



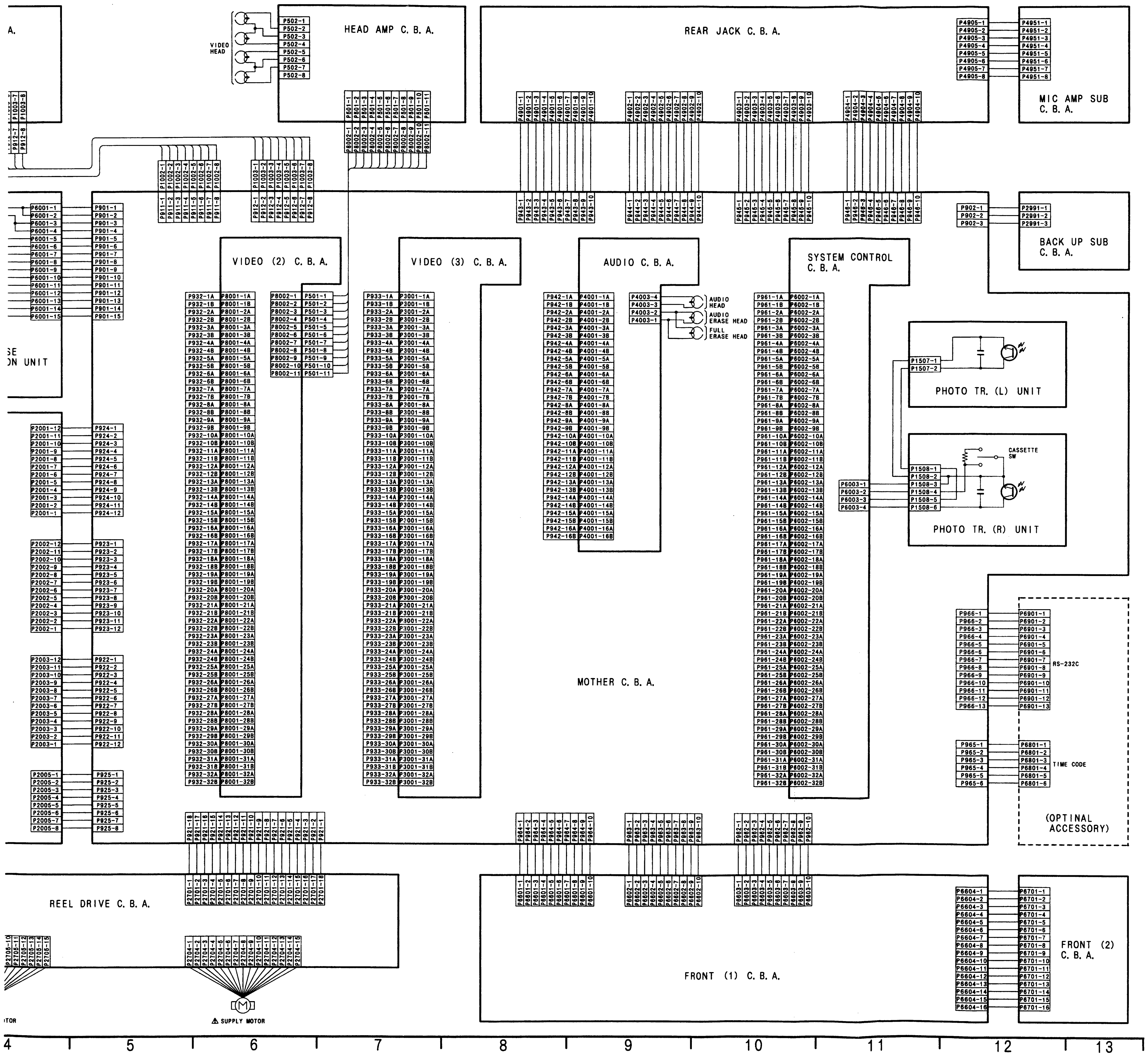
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
P901 (TO MECHA CONNECT)
1 LOADING M (+)
2 LOADING M (+)
3 LOADING M (−)
4 LOADING M (−)
5 DEW
6 C DOWN (L)
7 SNS GND
8 SNS LED
9 SAFTY TAB
10
11 GND
12 POS PLAY
13 POS EJECT
14 POS STOP
15 POS LOAD
P924 (TO SERVO)
P2001-12 GND 1
P2001-11 2
P2001-10 TAPE SPEED 3
P2001-9 CAP FG 4
P2001-8 SCK S 5
P2001-7 SDA S 6
P2001-6 CAP ON/OFF 7
P2001-5 CAP FR 8
P2001-4 CTL PULSE 9
P2001-3 TC CLK 10
P2001-2 H SW 11
P2001-1 REC GATE (L) 12
P945 (TO REAR JACK)
P4903-1 AUDIO IN 1
P4903-2 SW 12V 2
P4903-3 AUDIO OUT 3
P4903-4 AUDIO OUT GND 4
P4903-5 ALARM IN 5
P4903-6 GND 6
P4903-7 ALARM RESET IN 7
P4903-8 ALARM RECOVER 8
P4903-9 ALARM OUT 9
P4903-10 1 SHOT IN 10
P946 (TO REAR JACK)
P4904-1 GND 1
P4904-2 TAPE END OUT 2
P4904-3 WARNING OUT 3
P4904-4 4
P4904-5 5
P4904-6 6
P4904-7 7
P4904-8 8
P4904-9 9
P4904-10 10
P922 (TO SERVO)
P2003-12 H A SW 1
P2003-11 COMPEL VHS (L) 2
P2003-10 SP (H) 3
P2003-9 FM S/E 4
P2003-8 TIME MODE 2 5
P2003-7 FM OPT 1 6
P2003-6 FM OPT 2 7
P2003-5 TIME MODE 3 8
P2003-4 TIME MODE 1 9
P2003-3 T REEL FB 10
P2003-2 BACK UP 5V 11
P2003-1 S REEL FB 12
BACK UP 5V
P923 (TO SERVO)
P2002-12 4P (H) 1
P2002-11 2H DL SW 2
P2002-10 ART V/H/N 3
P2002-9 ROTARY SW 4
P2002-8 TL MODE (H) 5
P2002-7 PB CTL 6
P2002-6 V SYNC 7
P2002-5 TRICK (L) 8
P2002-4 COMPEL COLOR (H) 9
P2002-3 COMPEL B/W (L) 10
P2002-2 TRACK ENV 11
P2002-1 ENV SEL 12
P961 (TO SYSTEM CTL.)
NO A B NO
1 M GND P6002-1A P6002-1B M GND 1
2 M 12V P6002-2A P6002-2B M 12V 2
3 DEW P6002-3A P6002-3B LOADING M (+) 3
4 SNS LED P6002-4A P6002-4B LOADING M (−) 4
5 S REEL FG P6002-5A P6002-5B REEL SOL (H) 5
6 T REEL FG P6002-6A P6002-6B A 12V 6
7 SR PHOTO P6002-7A P6002-7B A GND 7
8 SF PHOTO P6002-8A P6002-8B V REF 8
9 S REEL ET P6002-9A P6002-9B CHANGE 9
10 T REEL ET P6002-10A P6002-10B T O U 10
11 ALARM IN P6002-11A P6002-11B S REEL RSF 11
12 ALARM RESET IN P6002-12A P6002-12B T REEL RSF 12
13 ALARM RECOVER P6002-13A P6002-13B ALARM OUT 13
14 1 SHOT IN P6002-14A P6002-14B TAPE END OUT 14
15 WARNING OUT P6002-15A P6002-15B 15
16 P6002-16A P6002-16B 16
17 SERIAL IN P6002-17A P6002-17B 17
18 REMOTE IN P6002-18A P6002-18B CAMERA SW OUT 18
19 H METER RST P6002-19A P6002-19B TC CLK 19
20 SDA F P6002-20A P6002-20B SCK F 20
21 AUDIO MUTE (H) P6002-21A P6002-21B EE (L) 21
22 EX REC (L) P6002-22A P6002-22B D REC (H) 22
23 PB NG (H) P6002-23A P6002-23B NO VIDEO (H) 23
24 REC GATE (L) P6002-24A P6002-24B BIAS PRTCT 24
25 CTL PULSE P6002-25A P6002-25B H SW 25
26 SDA S P6002-26A P6002-26B CAP ON/OFF 26
27 CAP FG P6002-27A P6002-27B SCK S 27
28 SAFTY TAB P6002-28A P6002-28B POS PLAY 28
29 POS LOAD P6002-29A P6002-29B POS STOP 29
30 POS EJECT P6002-30A P6002-30B POWER OFF (L) 30
31 SW 5V P6002-31A P6002-31B NON SW 5V 31
32 D GND P6002-32A P6002-32B C DOWN (L) 32
M 12V
SW 12V
SW 5V
NON SW 5V
P942 (TO AUDIO)
NO A B NO
1 S CASS (H) P4001-1A P4001-1B AUDIO OUT 1
2 BIAS PRTCT P4001-2A P4001-2B AUDIO IN 2
3 GND P4001-3A P4001-3B GND 3
4 SW 12V P4001-4A P4001-4B SW 12V 4
5 PB CTL P4001-5A P4001-5B 5
6 P4001-6A P4001-6B TAPE SPEED 6
7 P4001-7A P4001-7B D REC (H) 7
8 EE (H) P4001-8A P4001-8B AUDIO MUTE (H) 8
9 P4001-9A P4001-9B TL MODE (H) 9
10 P4001-10A P4001-10B 10
11 V GND P4001-11A P4001-11B V GND 11
12 P4001-12A P4001-12B 12
13 P4001-13A P4001-13B 13
14 P4001-14A P4001-14B 14
15 P4001-15A P4001-15B 15
16 P4001-16A P4001-16B 16
P911 (TO POWER (1))
1 GND P1002-1
2 GND P1002-2
3 GND P1002-3
4 SW 5V P1002-4
5 SW 5V P1002-5
6 SW 12V P1002-6
7 NON SW 5V P1002-7
8 POWER OFF (L) P1002-8
SW 5V
SW 5V
SW 12V
NON SW 5V
(A-LINE)
(B-LINE)
(C-LINE)
(D-LINE)
(E-LINE)
(F-LINE)
P932 (TO VIDEO (2))
NO A B NO
1 V GND P8001-1A P8001-1B COMPEL COLOR (H) 1
2 P8001-2A P8001-2B TRACK ENV 2
3 COMPEL B/W (L) P8001-3A P8001-3B 3
4 P8001-4A P8001-4B TRICK (H) 4
5 P8001-5A P8001-5B 5
6 V GND P8001-6A P8001-6B 6
7 P8001-7A P8001-7B PLAY 5V 7
8 EE (H) P8001-8A P8001-8B 8
9 PLAY 5V P8001-9A P8001-9B DOC 9
10 COLOR (H) P8001-10A P8001-10B 10
11 V GND P8001-11A P8001-11B V GND 11
12 P8001-12A P8001-12B 12
13 V GND P8001-13A P8001-13B 13
14 V GND P8001-14A P8001-14B OSD OUT 14
15 V GND P8001-15A P8001-15B V GND 15
16 YNR IN P8001-16A P8001-16B RF Y 16
17 YNR OUT P8001-17A P8001-17B 17
18 C OUT P8001-18A P8001-18B V GND 18
19 V GND P8001-19A P8001-19B 19
20 V GND P8001-20A P8001-20B V GND 20
21 V GND P8001-21A P8001-21B HSS 21
22 REC Y P8001-22A P8001-22B 22
23 SW 12V P8001-23A P8001-23B SW 12V 23
24 SW 5V P8001-24A P8001-24B SW 5V 24
25 V GND P8001-25A P8001-25B V GND 25
26 P8001-26A P8001-26B H SW 26
27 H A SW P8001-27A P8001-27B ENV SEL 27
28 P8001-28A P8001-28B 28
29 PB NG (H) P8001-29A P8001-29B EX REC (L) 29
30 REC GATE (L) P8001-30A P8001-30B EE (L) 30
31 D REC (H) P8001-31A P8001-31B TRICK (L) 31
32 ROTARY SW P8001-32A P8001-32B 32
PLAY 5V
SW 12V
SW 5V
P933 (TO VIDEO (3))
NO A B NO
1 PICK CONT P3001-1A P3001-1B V GND 1
2 P3001-2A P3001-2B 2
3 P3001-3A P3001-3B OSD CLK 3
4 OSD DATA P3001-4A P3001-4B OSD CS 4
5 T/D W (L) P3001-5A P3001-5B T/D SMALL (H) 5
6 NO VIDEO (H) P3001-6A P3001-6B 6
7 EE HSS P3001-7A P3001-7B 7
8 EE (H) P3001-8A P3001-8B 8
9 DOC P3001-9A P3001-9B PLAY 5V 9
10 COLOR (H) P3001-10A P3001-10B V SYNC 10
11 V GND P3001-11A P3001-11B V GND 11
12 P3001-12A P3001-12B 12
13 P3001-13A P3001-13B V GND 13
14 OSD OUT P3001-14A P3001-14B V GND 14
15 P3001-15A P3001-15B V GND 15
16 YNR IN P3001-16A P3001-16B 16
17 YNR OUT P3001-17A P3001-17B RF Y 17
18 VITC REC P3001-18A P3001-18B C OUT 18
19 VITC MUTE P3001-19A P3001-19B 19
20 VITC Y P3001-20A P3001-20B V GND 20
21 V GND P3001-21A P3001-21B HSS 21
22 UNREG −30V P3001-22A P3001-22B REC Y 22
23 SW 12V P3001-23A P3001-23B SW 12V 23
24 SW 5V P3001-24A P3001-24B SW 5V 24
25 P3001-25A P3001-25B V GND 25
26 P3001-26A P3001-26B H SW 26
27 VIDEO OUT P3001-27A P3001-27B 27
28 ART V/H/N P3001-28A P3001-28B V GND 28
29 P3001-29A P3001-29B V GND 29
30 P3001-30A P3001-30B V GND 30
31 V GND P3001-31A P3001-31B V GND 31
32 VIDEO IN P3001-32A P3001-32B 32
UNREG −30V
SW 12V
SW 5V
PLAY 5V
P925 (TO SERVO)
1 NON SW 5V P2005-1
2 SW 5V P2005-2
3 GND P2005-3
4 M 12V P2005-4
5 M 18V P2005-5
6 M GND P2005-6
7 M GND P2005-7
8 BATTERY P2005-8
NON SW 5V
SW 5V
M 12V
M 18V
P902
1
2 BATTERY
3 GND
P2991
1
BATTERY 2
GND 3
BAT2991
VSB0004
BACK UP SUB C. B. A.
(VEP00S71B)
(A1) (A2) (A3) (A4) (A5) (A6) (A7) (A8) (A9) (A10) (A11) (A12) (A13) (A14) (A15) (A16) (A17) (A18) (A19) (A20) (A21) (A22) (A23)
(B1) (B2) (B3) (B4) (B5) (B6) (B7) (B8) (B9) (B10) (B11)
(C1) (C2) (C3) (C4) (C5) (C6) (C7) (C8) (C9) (C10) (C11) (C12) (C13) (C14) (C15) (C16) (C17) (C18) (C19) (C20) (C21) (C22) (C23) (C24) (C25) (C26) (C27)
(D1) (D3) (D4) (D5) (D6) (D7) (D8)
(E1) (E2) (E3) (E4) (E5) (E6) (E7)
(F1) (F2) (F3) (F5) (F6)


P942 (TO AUDIO)
1 S CASS (H) P4001-1A P4001-1B AUDIO OUT
2 BIAS PRTCT P4001-2A P4001-2B AUDIO IN
3 GND P4001-3A P4001-3B GND
4 SW 12V P4001-4A P4001-4B SW 12V
5 PB CTL P4001-5A P4001-5B
6 P4001-6A P4001-6B TAPE SPEED
7 P4001-7A P4001-7B D REC (H)
8 EE (H) P4001-8A P4001-8B AUDIO MUTE (H)
9 P4001-9A P4001-9B TL MODE (H)
10 P4001-10A P4001-10B
11 V GND P4001-11A P4001-11B V GND
12 P4001-12A P4001-12B
13 P4001-13A P4001-13B
14 P4001-14A P4001-14B
15 P4001-15A P4001-15B
16 P4001-16A P4001-16B
P911 (TO POWER (1))
1 GND P1002-1
2 GND P1002-2
3 GND P1002-3
4 SW 5V P1002-4
5 SW 5V P1002-5
6 SW 12V P1002-6
7 NON SW 5V P1002-7
8 POWER OFF (L) P1002-8
P921 (TO REEL DRIVE)
1 T REEL ET P2701-18
2 T O U P2701-17
3 S REEL RSF P2701-16
4 S REEL ET P2701-15
5 T REEL RSF P2701-14
6 CHANGE P2701-13
7 T REEL FB P2701-12
8 SF PHOTO P2701-11
9 S REEL FB P2701-10
10 V REF P2701-9
11 SR PHOTO P2701-8
12 T REEL FG P2701-7
13 S REEL FG P2701-6
14 GND P2701-5
15 SW 12V P2701-4
16 GND P2701-3
17 SW 5V P2701-2
18 REEL SOL (H) P2701-1
P964 (TO FRONT 1)
1 BACK UP 5V P6601-1
2 SW 12V P6601-2
3 NON SW 5V P6601-3
4 HEATER (+) P6601-4
5 HEATER (-) P6601-5
6 P6601-6
7 SCK F P6601-7
8 SDA F P6601-8
9 H METER RST P6601-9
10 P6601-10
P912 (TO POWER (1))
1 HEATER (+) P1003-1
2 HEATER (-) P1003-2
3 UNREG -30V P1003-3
4 M GND P1003-4
5 M GND P1003-5
6 M 12V P1003-6
7 M 18V P1003-7
8 P1003-8
P966 (TO RS-232C)
1 VITC MUTE
2 EE HSS
3 SCK F
4 SDA F
5 232C TC ON (L)
6
7 REC GATE (L)
8 TC CLK
9 CTL PULSE
10 CAP FR
11 GND
12 GND
13 NON SW 5V
P943 (TO REAR JACK)
1 P4901-1
2 P4901-2
3 VIDEO OUT P4901-3
4 V GND P4901-4
5 P4901-5
6 P4901-6
7 V GND P4901-7
8 CAMERA SW OUT P4901-8
9 REMOTE IN P4901-9
10 SW 5V P4901-10
B NO
5002-1B M GND 1
5002-2B M 12V 2
5002-3B LOADING M (+) 3
5002-4B LOADING M (-) 4
5002-5B REEL SOL (H) 5
5002-6B A 12V 6
5002-7B A GND 7
5002-8B V REF 8
5002-9B CHANGE 9
5002-10B T O U 10
5002-11B S REEL RSF 11
5002-12B T REEL RSF 12
5002-13B ALARM OUT 13
5002-14B TAPE END OUT 14
5002-15B 15
5002-16B 16
5002-17B 17
5002-18B CAMERA SW OUT 18
5002-19B TC CLK 19
5002-20B SCK F 20
5002-21B EE (L) 21
5002-22B D REC (H) 22
5002-23B NO VIDEO (H) 23
5002-24B BIAS PRTCT 24
5002-25B H SW 25
5002-26B CAP ON/OFF 26
5002-27B SCK S 27
5002-28B POS PLAY 28
5002-29B POS STOP 29
5002-30B POWER OFF (L) 30
5002-31B NON SW 5V 31
5002-32B C DOWN (L) 32
M 12V
SW 12V
NON SW 5V
SW 12V
SW 5V
NON SW 5V
UNREG -30V
M 12V
M 18V
BACK UP 5V
(A-LINE)
(B-LINE)
(C-LINE)
(D-LINE)
(F-LINE)
(A1) (A2) (A3) (A5) (A7) (A9) (A11) (A13) (A14) (A15) (A16) (A18) (A22)
(B1) (B2) (B3) (B4) (B5) (B6) (B7) (B8) (B9) (B10) (B11)
(C1) (C2) (C3) (C4) (C5) (C6) (C7) (C8) (C9) (C10) (C11) (C12) (C13) (C14) (C15) (C16) (C17) (C18) (C19) (C20) (C21) (C22) (C23) (C24) (C25) (C26) (C27)
(D1) (D2) (D3) (D4) (D5) (D6) (D7) (D8)
(E1) (E3) (E4) (E6) (E7)
(F1) (F2) (F3) (F5) (F6)
B NO
8001-1B COMPEL COLOR (H) 1
8001-2B TRACK ENV 2
8001-3B 3
8001-4B TRICK (H) 4
8001-5B 5
8001-6B 6
8001-7B PLAY 5V 7
8001-8B 8
8001-9B DOC 9
8001-10B 10
8001-11B V GND 11
8001-12B 12
8001-13B 13
8001-14B OSD OUT 14
8001-15B V GND 15
8001-16B RF Y 16
8001-17B 17
8001-18B V GND 18
8001-19B 19
8001-20B V GND 20
8001-21B HSS 21
8001-22B 22
8001-23B SW 12V 23
8001-24B SW 5V 24
8001-25B V GND 25
8001-26B H SW 26
8001-27B ENV SEL 27
8001-28B 28
8001-29B EX REC (L) 29
8001-30B EE (L) 30
8001-31B TRICK (L) 31
8001-32B 32
PLAY 5V
P933 (TO VIDEO (3))
1 PICK CONT P3001-1A P3001-1B V GND
2 P3001-2A P3001-2B
3 P3001-3A P3001-3B OSD CLK
4 OSD DATA P3001-4A P3001-4B OSD CS
5 T/D W (L) P3001-5A P3001-5B T/D SMALL (H)
6 NO VIDEO (H) P3001-6A P3001-6B
7 EE HSS P3001-7A P3001-7B
8 EE (H) P3001-8A P3001-8B
9 DOC P3001-9A P3001-9B PLAY 5V
10 COLOR (H) P3001-10A P3001-10B V SYNC
11 V GND P3001-11A P3001-11B V GND
12 P3001-12A P3001-12B
13 P3001-13A P3001-13B V GND
14 OSD OUT P3001-14A P3001-14B V GND
15 P3001-15A P3001-15B V GND
16 YNR IN P3001-16A P3001-16B
17 YNR OUT P3001-17A P3001-17B RF Y
18 VITC REC P3001-18A P3001-18B C OUT
19 VITC MUTE P3001-19A P3001-19B
20 VITC Y P3001-20A P3001-20B V GND
21 V GND P3001-21A P3001-21B HSS
22 UNREG -30V P3001-22A P3001-22B REC Y
23 SW 12V P3001-23A P3001-23B SW 12V
24 SW 5V P3001-24A P3001-24B SW 5V
25 P3001-25A P3001-25B V GND
26 P3001-26A P3001-26B H SW
27 VIDEO OUT P3001-27A P3001-27B
28 ART V/H/N P3001-28A P3001-28B V GND
29 P3001-29A P3001-29B V GND
30 P3001-30A P3001-30B V GND
31 V GND P3001-31A P3001-31B V GND
32 VIDEO IN P3001-32A P3001-32B
P962 (TO FRONT 1)
1 OSD CS P6603-1
2 T/D W (L) P6603-2
3 T/D SMALL (H) P6603-3
4 S-VHS (H) P6603-4
5 P6603-5
6 UNREG -30V P6603-6
7 P6603-7
8 TIME ADJ OUT P6603-8
9 TIME ADJ IN P6603-9
10 232C TC ON (L) P6603-10
P963 (TO FRONT 1)
1 GND P6602-1
2 GND P6602-2
3 P6602-3
4 P6602-4
5 P6602-5
6 V GND P6602-6
7 V GND P6602-7
8 PICT CONT P6602-8
9 OSD CLK P6602-9
10 OSD DATA P6602-10
P965 (TO TIME CODE)
1 VITC Y
2 V GND
3 VITC REC
4 V GND
5
6
P944 (TO REAR JACK)
1 P4902-1
2 VIDEO IN P4902-2
3 P4902-3
4 P4902-4
5 P4902-5
6 P4902-6
7 P4902-7
8 P4902-8
9 P4902-9
10 V GND P4902-10
P902
1
2 BATTERY
3 GND
P2991
BATTERY 2
GND 3
BAT2991
VSB0004
BACK UP SUB C. B. A.
(VEP00S71B)
4
5
6
7
8
9
10
11
12
13

INTERCONNECTION SCHEMATIC DIAGRAM


POWER SUPPLY (2) C. B. A.
POWER SUPPLY (1) C. B. A.
VIDEO HEAD
HEAD AMP C. B. A.
REAR JACK C. B. A.
LOADING MOTOR
DEW SENSOR
MECHANISM CONNECTION UNIT
SENSOR LED
SAFETY TAB SW
CASSETTE DOWN SW
MODE SELECT SW
MOTOR BASE CONNECTION UNIT
VIDEO (2) C. B. A.
VIDEO (3) C. B. A.
AUDIO C. B. A.
AUDIO HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
SYSTEM CONTR
C. B. A.
CTL HEAD
CYLINDER MOTOR
SERVO C. B. A.
CAPSTAN MOTOR
MOTHER C. B. A.
SUPPLY REVERSE TENSION SENSOR UNIT
SUPPLY FORWARD TENSION SENSOR UNIT
REEL SOLENOID
SOLENOID UNIT
REEL DRIVE C. B. A.
TAKE UP MOTOR
SUPPLY MOTOR
FRONT (1) C. B. A.
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
1

GRAM


HEAD AMP C. B. A.
VIDEO HEAD
REAR JACK C. B. A.
MIC AMP SUB C. B. A.
BACK UP SUB C. B. A.
VIDEO (2) C. B. A.
VIDEO (3) C. B. A.
AUDIO C. B. A.
AUDIO HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
SYSTEM CONTROL C. B. A.
PHOTO TR. (L) UNIT
CASSETTE SW
PHOTO TR. (R) UNIT
MOTHER C. B. A.
RS-232C
TIME CODE
(OPTINAL ACCESSORY)
REEL DRIVE C. B. A.
SUPPLY MOTOR
FRONT (1) C. B. A.
FRONT (2) C. B. A.
4
5
6
7
8
9
10
11
12
13

Section 8

EXPLODED VIEWS
AND
REPLACEMENT PARTS LISTS

CONTENTS

SERVICING FIXTURES & TOOLS LIST **PARTS-2**

EXPLODED VIEWS **PARTS-3**

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2. Moving Mechanism Section PARTS-5
3. Cassette Compartment Section PARTS-7
4. Chassis & Frame Section PARTS-8
5. Casing Parts Section PARTS-10
6. Packing Parts Section PARTS-11

MECHANICAL REPLACEMENT PARTS LIST **PARTS-4**

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2. Moving Mechanism Section PARTS-6
3. Cassette Compartment Section PARTS-6
4. Chassis & Frame Section PARTS-9
5. Casing Parts Section PARTS-9
6. Packing Parts Section PARTS-12

ELECTRICAL REPLACEMENT PARTS LIST **PARTS-13**

NOTES

1. - Be sure to make your orders of replacement parts according to this list.
   - "<R>" in Remark column indicates recommended parts.
   - "<M>" in Remark column indicates needed in the periodical maintenance.
2. IMPORTANT SAFETY NOTICE
   Components identified by "<!>" have special characteristics important for safety.
   When replacing any of these components, use only the original ones.
   Meaning of symbol "<!>" on this parts list is exactly the same as symbol △on Schematic and Circuit Board Diagrams.
3. Unless otherwise specified ;
   All resistors are in (Ω), K=1,000Ω, M=1,000kΩ.
   All capacitors are in (F), U=10^{-6} F, P=10^{-12} F.
4. ITEM NUMBERS WITH CAPITAL LETER E
   Item numbers with capital leter E (Example:E1, E2,...) in Ref.No. column mean that the parts are listed with the E item numbers in the exploded views.
5. The main assembled parts are shown below C.B.A. marked with "■" .
6. When ordering parts, use parts No. only form Part No. column.
7. Printed circuit board assembly with mark (NLA) is no longer available after discontinuation of the product.
8. Abbreviations for parts ;

-- NAME --	-- DESCRIPTION --
C.CAPACITOR	CERAMIC CAPACITOR
C.CAPACITOR CH	CERAMIC CHIP CAPACITOR
E.CAPACITOR	ELECTROLYTIC CAPACITOR
G.CAPACITOR	GLASS CAPACITOR
M.CAPACITOR	MICA CAPACITOR
P.CAPACITOR	PLASTIC FILM CAPACITOR
S.CAPACITOR	SEMI-CONDUCTOR CAPACITOR
T.CAPACITOR	TANTALUM CAPACITOR
TRIMMER	TRIMMER
C.RESISTOR	CARBON RESISTOR
F.RESISTOR	FUSE RESISTOR
M.RESISTOR	METAL OXSIDE RESISTOR
M.RESISTOR CH	METAL OXSIDE CHIP RESISTOR
S.RESISTOR	SOLID RESISTOR
V.RESISTOR	VARIABLE RESISTOR
W.RESISTOR	WIRE WOUND RESISTOR
COMBI. TR-R	TRANSITOR-RESISTOR COMBINATION PARTS
COMBI. R-R	RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R-L	CAPACITOR-COIL COMBINATION PARTS
C.B.A.	CIRCUIT BOARD ASSEMBLY

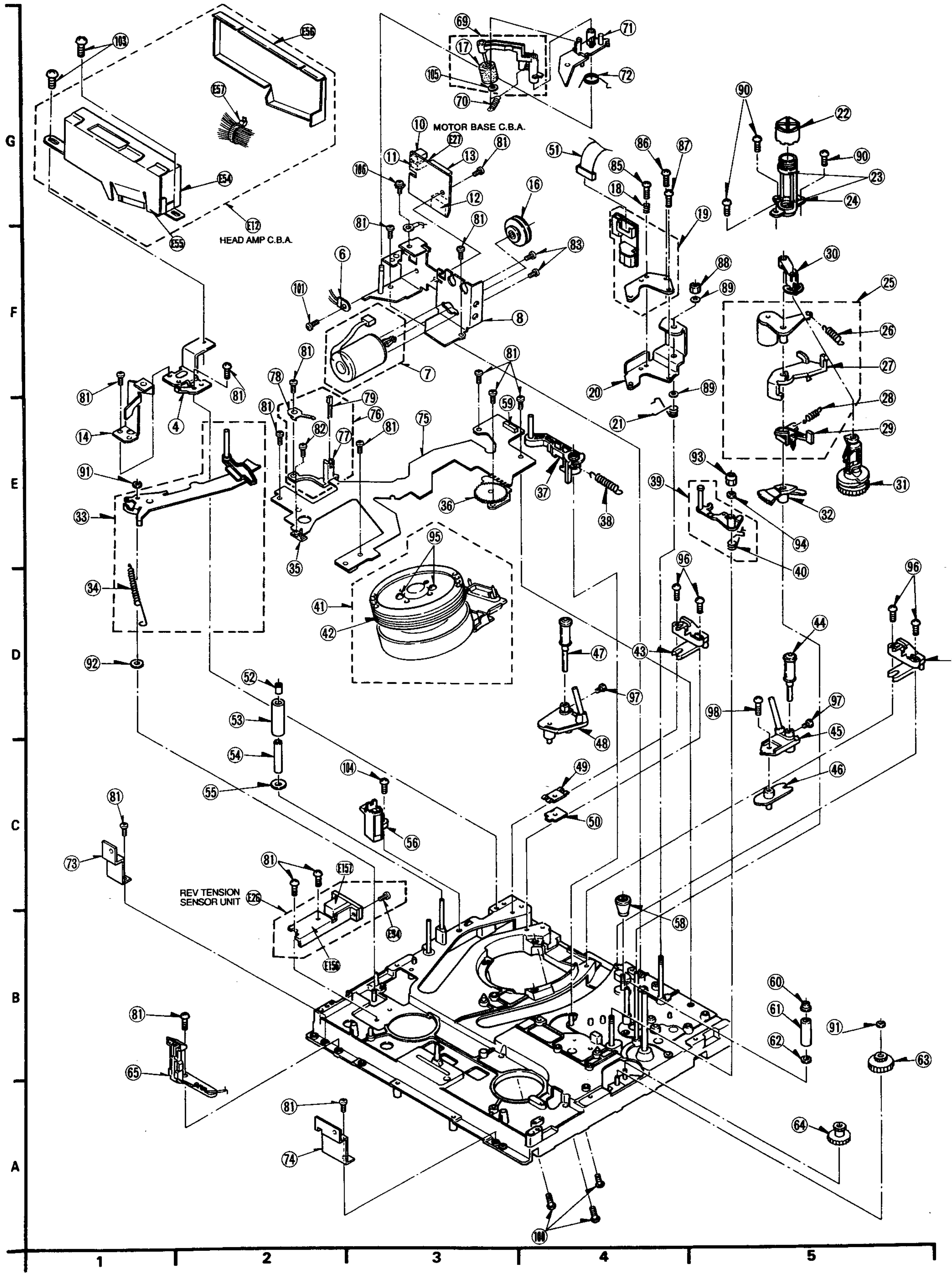
SERVICING FIXTURES & TOOLS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFM8180HADH	VHS ALIGNMENT TAPE	1	
		VFK0329	POST ADJ. SCREWDRIVER	1	
		VFK0132	BACK TENSION METER	1	(T2-H7-UM)
			(TENTELOMETER,		
			MADE IN U.S.A.)		
		VFK0191	POST ADJ. PLATE	1	
		VFK0133	DIAL TORQUE GAUGE	1	
		VFK0180	PLASTIC CLAMPER ONLY	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0236	TENSION POST ADJ. FIXTURE	1	
		VFK0806	TENSION SENSOR ADJ. FIXTURE	1	
		VFK0328	H-POSITION ADJ. SCREWDRIVER	1	
		VFK0330	FINE ADJ. SCREWDRIVER	1	
			(3mm PHI)		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0326	HEX.WRENCH SET	1	
		VFK0343	CHECK LIGHT	1	
		MOR265	MOLYTONE GREASE	1	FOR METAL PART
		VFK27	HEAD CLEANING STICK	1	
		VFK0344	POST HEIGHT ADJ. FIXTURE	1	
		VFK0269	L TYPE SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0680	S.C.R. GREASE	1	FOR PLASTIC PART
		VFK0827	EXTENDER BOARD (32P)	1	
		VFK0829	EXTENDER BOARD (64P)	1	
		VFK0828	EXTENDER CABLE (8P)	2	
		VFK0685	EXTENDER BOARD	1	

EXPLODED VIEWS

❶ *Chassis Parts Section*

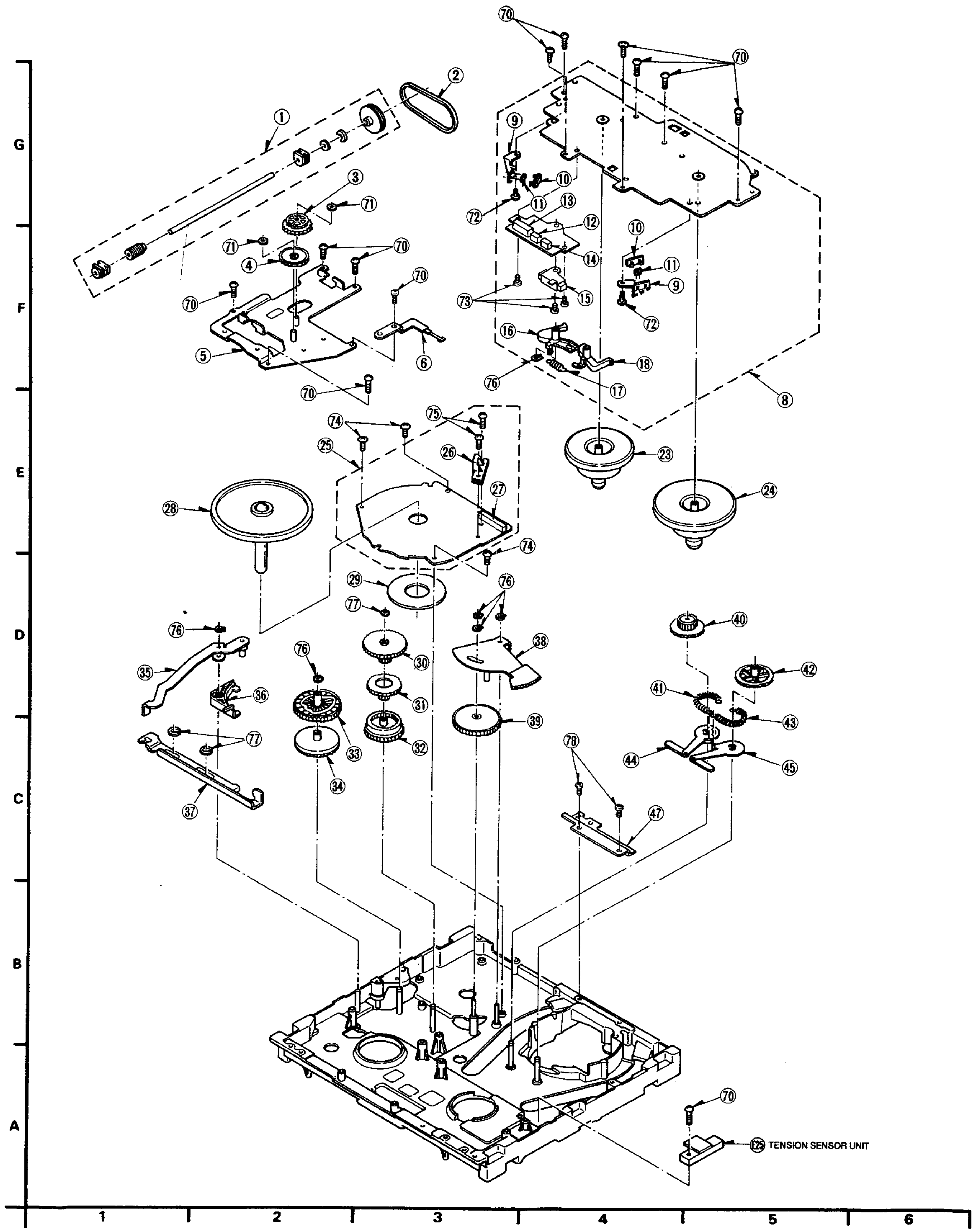


MECHANICAL REPLACEMENT PARTS LIST

1. Chassis Parts Section

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1-4	VMA7982	HEAD AMP ANGLE (L)	1	
1-6	VEK3185	HUMIDITY RESISTOR UNIT	1	<R>
1-7	VEM0360	LOADING MOTOR UNIT	1	<M><R><!>
1-8	VXA4836	MOTOR BASE UNIT	1	
1-10	VJP1229G	CONNECTOR (2P)	1	
1-11	VJP1229T	CONNECTOR (2P)	1	
1-12	VJP3106B013	CONNECTOR (13P)	1	
1-13	VJS1493	CONNECTOR (15P)	1	
1-16	VDP1319	MOTOR PULLEY	1	
1-18	VMB1251	ADJUST SPRING	1	
1-19	VED0186	A/C HEAD (1) UNIT	1	<M><R>
1-20	VXA3649	A/C HEAD BASE UNIT	1	
1-21	VMB1567	A/C HEIGHT SPRING	1	
1-22	VXQ0006	THRUST SCREW UNIT	1	
1-23	VMX1033	OIL SEAL	2	
1-24	VXD0101	HOUSING UNIT	1	
1-25	VXL1902	PRESSURE ROLLER UNIT	1	<M><R>
1-26	VMB1977	PINCH PRESSURE SPRING	1	
1-27	VXL1873	PINCH PRESSURE ARM	1	
1-28	VMB1569	PINCH ARM SPRING	1	
1-29	VML1874	PINCH LIFT ARM	1	
1-30	VMX1353	PINCH CAM ARM	1	
1-31	VDG0577	PINCH CAM	1	
1-32	VDG0651	PULL OUT SECTOR GEAR	1	
1-33	VXL2089	TENSION ARM UNIT	1	
1-34	VMB1975	TENSION SPRING	1	
1-35	VSP0293	CASSETTE DETECT SW	1	
1-36	VSS0257	MODE SWITCH	1	<M><R>
1-37	VXL1857	SUB LOADING ARM (1) UNIT	1	
1-38	VMB1566	SUB POST SPRING	1	
1-39	VXL2074	P5 UNIT	1	
1-40	VMB1554	P5 SPRING	1	
1-41	VEG0759	CYLINDER UNIT	1	<M><R>
1-42	VEH0385	UPPER CYLINDER UNIT	1	<M><R>
1-43	VMD0910	POST STOPPER	2	
1-44	VXP1094	ROLLER POST (T) UNIT	1	
1-45	VXA3213	INCLINED BASE (T)(1) UNIT	1	
1-46	VXA2687	INCLINED ADJUSTMENT PLATE U	1	
1-47	VXP1093	ROLLER POST (S) UNIT	1	
1-48	VXA3249	INCLINED BASE (S)(2) UNIT	1	
1-49	VMA7029	HOLDER PLATE (S)	1	
1-50	VMA7660	PLATE	1	
1-51	VEE8058	FLEXIBLE CABLE	1	
1-52	VMX1088	UPPER LIMITER	1	
1-53	VDP1304	SUPPLY ROLLER	1	
1-54	VMX1581	P1 COLIAR	1	
1-55	VMX1533	LOWER LIMITER	1	
1-56	VBS0038	FE HEAD	1	
1-58	VHN0110	ADJUST NUT	1	
1-59	VJS2964A013	CONNECTOR (15P)	1	
1-60	VMX1544	P4 UPPER LIMITER	1	
1-61	VMX1568	P4 SLEEVE	1	
1-62	VMX1534	P4 LOWER LIMITER	1	
1-63	VDG0664	CONNECTION GEAR	1	
1-64	VDG0483	PINCH SPEED DOWN GEAR	1	
1-65	VES0489	SAFETY SWITCH	1	
1-69	VXL2087	HEAD CLEANING (1) UNIT	1	
1-70	VMB2263	CLEANING SPRING (A)	1	
1-71	VML2510	HEAD CLEANING PLATE (B)	1	
1-72	VMB2264	CLEANING SPRING (B)	1	
1-73	VMA6895	MOUNT PLATE (L)	1	
1-74	VMA6896	MOUNT PLATE (R)	1	
1-75	VXA4837	BEND FLEXIBLE UNIT	1	
1-76	VXA3520	LED UNIT	1	
1-77	VMD0911	LED HOLDER	1	
1-78	VMB2020	EARTH SPRING	1	
1-79	GL450	LED	1	
1-81	XTV26+6F	SCREW	15	
1-82	XTV2+4F	SCREW	1	
1-83	XSN3+3.5	SCREW	2	
1-85	VHD0322	SCREW	1	
1-86	VHD0089B	SCREW	1	
1-87	XSN3D6FZ	SCREW	1	
1-88	VHN0063	M4 NYLON NUT	1	
1-89	XWE4	M4 NYLON WASHER	2	
1-90	VHD0374	SCREW	3	
1-91	VMX0653	CUT WASHER	2	
1-92	XWGV3D6G	POLLY SLIDER WASHER	1	
1-93	VHD0045	M3 NYLON NUT	1	
1-94	XWE3VW	M3 WASHER	1	
1-95	VHD0425	SCREW	2	
1-96	XTV26+10F	SCREW	4	
1-97	VHD0133	SCREW	2	
1-98	XYN26+F6FZ	SCREW	1	
1-100	VHD0342	SCREW	3	
1-101	XTV2+6J	SCREW	1	
1-103	XTW3+8LR	SCREW	2	
1-104	XTV26+8F	SCREW	1	
1-105	VMX1061	CUT WASHER	1	
1-106	XYE3+EF8R	SCREW	1	

❷ *Moving Mechanism Section*



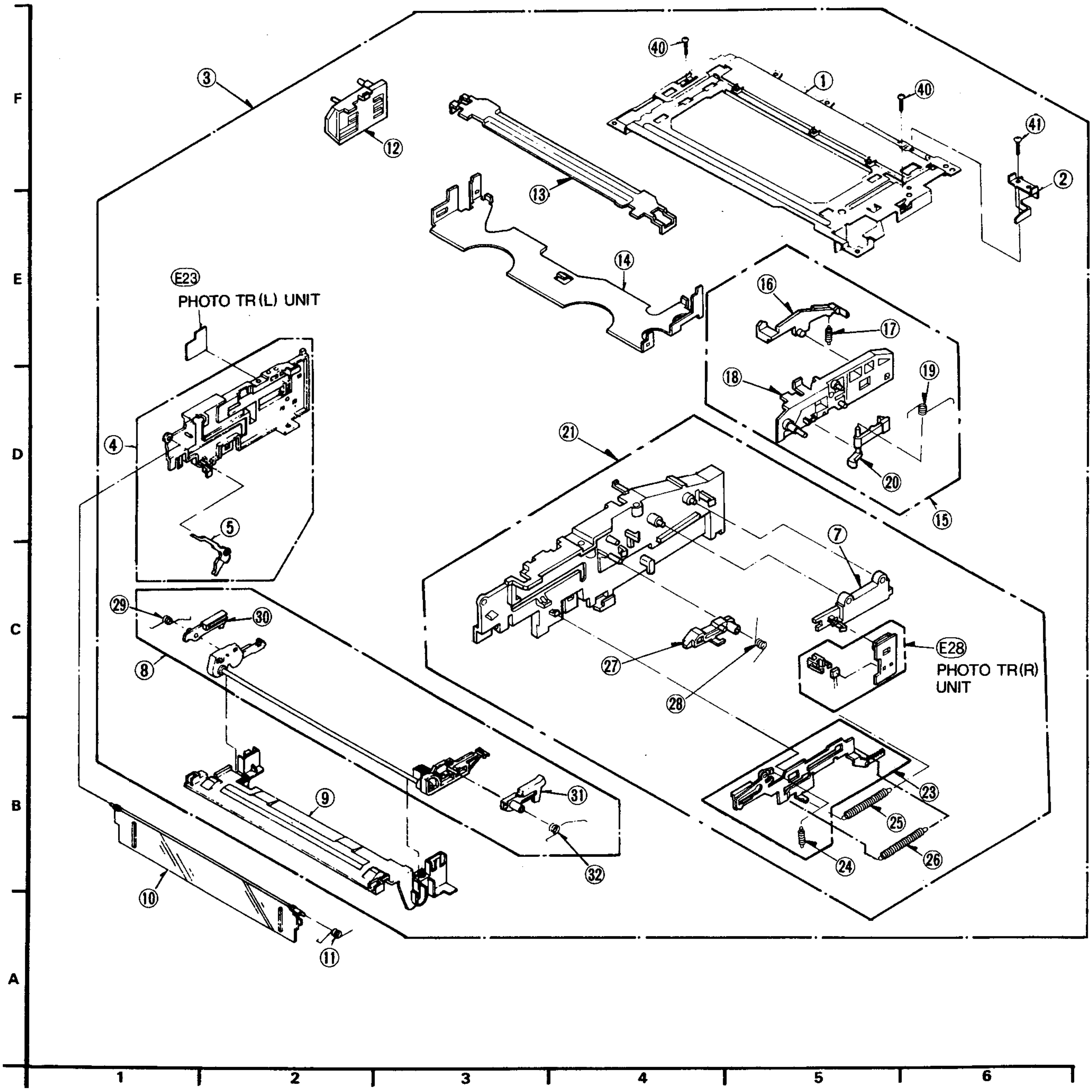
2. Moving Mechanism Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
2-1		VXP1082	WORM SHAFT UNIT	1	
2-2		VDV0215	LOADING BELT	1	<M><R>
2-3		VDG0581	WORM WHEEL	1	
2-4		VDG0582	INTERMEDIATE GEAR	1	
2-5		VXA3646	GEAR BASE (1) UNIT	1	
2-6		VXS0082	EARTH SPRING	1	
2-8		VXA4839	STATOR BASE UNIT	1	
2-9		VMD0611	FG SUPPORT (1)	2	
2-10		VMD0621	FG SUPPORT (2)	2	
2-11		HW-300B	HOLE IC	2	<R>
2-12		VJP1230R	CONNECTOR (3P)	1	
2-13		VJP3202A008Z	CONNECTOR (8P)	1	
2-14		VJP1230T	CONNECTOR (3P)	1	
2-15		VSJ0066	SOLENOID	1	<!>
2-16		VXZ0270	MAIN BRAKE (S) UNIT	1	<R>
2-17		VMB1978	BRAKE SPRING	1	
2-18		VXZ0271	MAIN BLAKE (T) UNIT	1	<R>
2-23		VXR0187	TAKEUP REEL TABLE UNIT	1	<R>
2-24		VXR0186	SUPPLY REEL TABLE UNIT	1	<R>
2-25		VEK4097	STATOR UNIT	1	
2-26		VBK0048	MR HEAD	1	<R>
2-27		VJS2587	CONNECTOR	1	
2-28		VXP1328	ROTOR UNIT	1	
2-29		VMA6847	SUB PLATE	1	
2-30		VDG0580	CENTER GEAR	1	
2-31		VXP0878	RETANER GEAR UNIT	1	
2-32		VDG0342	RING GEAR	1	
2-33		VDG0578	MAIN CAM GEAR	1	
2-34		VDG0343	SUB CAM GEAR	1	
2-35		VXL1895	CAM FOLLOWER ARM UNIT	1	
2-36		VML1861	DETENT ARM	1	
2-37		VMM0218	MAIN ROD	1	
2-38		VXA3144	SECTOR GEAR UNIT	1	
2-39		VDG0579	LOADING CAM GEAR	1	
2-40		VDG0420	LOADING GEAR (T)	1	
2-41		VMB1555	LOADING SPRING (T)	1	
2-42		VDG0419	LOADING GEAR (S)	1	
2-43		VMB1746	LOADING SPRING (S)	1	
2-44		VXL1489	LOADING ARM (T) (1) UNIT	1	
2-45		VXL1487	LOADING ARM (S) (1) UNIT	1	
2-47		VMA8003	MOUNT PLATE (B)	1	
2-70		XTV26+6F	SCREW	12	
2-71		VMX0653	CUT WASHER	2	
2-72		XYN2+F5	SCREW	2	
2-73		XSN26+4	SCREW	3	
2-74		XYEV0004	SCREW	3	
2-75		XYNV0015	SCREW	2	
2-76		XUEV3VW	WASHER	6	
2-77		VMX1079	CUT WASHER	3	
2-78		XTV3+8F	SCREW	2	

3. Cassette Compartment Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
3-1		VMA7223	TOP PLATE	1	
3-2		VMA7224	CASSETTE HOLDER ANGLE	1	
3-3		VXA4535	CASSETTE COMPERTMENT UNIT	1	
3-4		VXA4467	SIDE PLATE (L)(1) UNIT	1	
3-5		VML1880	OPENER LEVER	1	
3-7		VSS0258	SLIDE SWITCH	1	
3-8		VXP0987	MAIN SHAFT UNIT	1	
3-9		VMA6900	CASSETTE GUIDE UNIT	1	
3-10		VKF0731	BLINDER PANEL	1	
3-11		VMB1258	BLINDER SPRING	1	
3-12		VMD1387	HOLDER GUIDE	1	
3-13		VXA3831	HOLDER ANGLE UNIT	1	
3-14		VMA8406	CASSETTE HOLDER	1	
3-15		VXA3780	HOLDER GUIDE (R) UNIT	1	
3-16		VML1882	DOOR OPEN LEVER	1	
3-17		VMB1584	DOOR OPEN LEVER SPRING	1	
3-18		VMD1352	HOLDER GUIDE (R)	1	
3-19		VMB2013	RELEASE SPRING	1	
3-20		VML2306	RELEASE LEVER	1	
3-21		VXA4076	SIDE PLATE (R)(1) UNIT	1	
3-22		VSS0258	SLIDE SWITCH	1	
3-23		VXA3497	SUB RACK UNIT	1	
3-24		VMB1962	RACK C SPRING	1	
3-25		VMB1943	CLUTCH SPRING (A)	1	
3-26		VMB1942	CLUTCH SPRING (B)	1	
3-27		VML2427	DOWN SUPPORT LEVER	1	
3-28		VMB1961	DOWN SUPPORT SPRING	1	
3-29		VMB1836	SUB WIPER SPRING (L)	1	
3-30		VML1876	SUB WIPER ARM (L)	1	
3-31		VML1877	SUB WIPER ARM (R)	1	
3-32		VMB1837	SUB WIPER SPRING (R)	1	
3-40		XTB26+8G	SCREW	2	
3-41		XTV26+6F	SCREW	1	

❸ *Cassette Compartment Section*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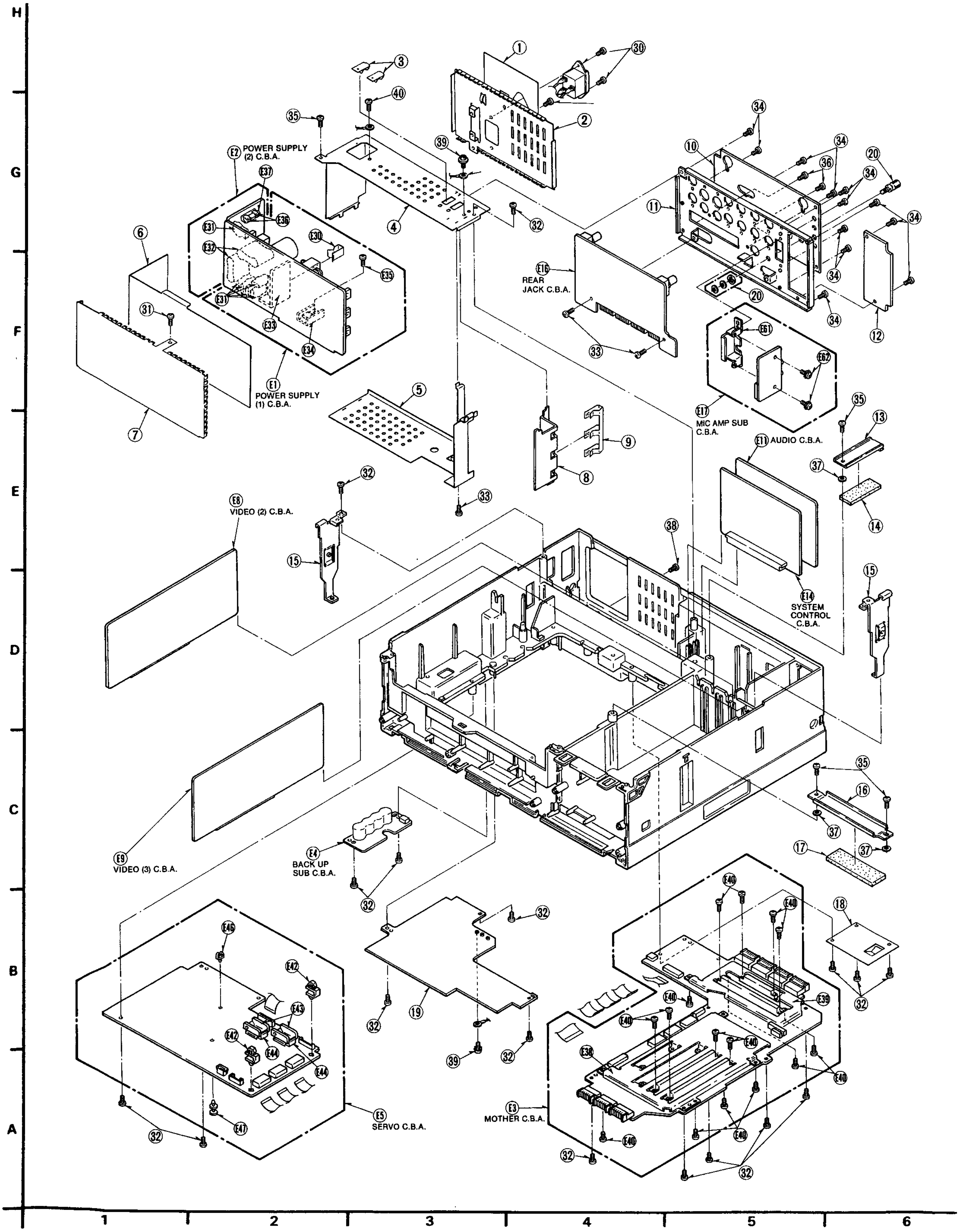
❹ Chassis & Frame Section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E2 POWER SUPPLY (2) C.B.A.
E1 POWER SUPPLY (1) C.B.A.
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E37
E16 REAR JACK C.B.A.
E61
E62
E17 MIC AMP SUB C.B.A.
E11 AUDIO C.B.A.
E14 SYSTEM CONTROL C.B.A.
E8 VIDEO (2) C.B.A.
E9 VIDEO (3) C.B.A.
E4 BACK UP SUB C.B.A.
E5 SERVO C.B.A.
E42
E43
E44
E46
E47
E3 MOTHER C.B.A.
E38
E39
E40

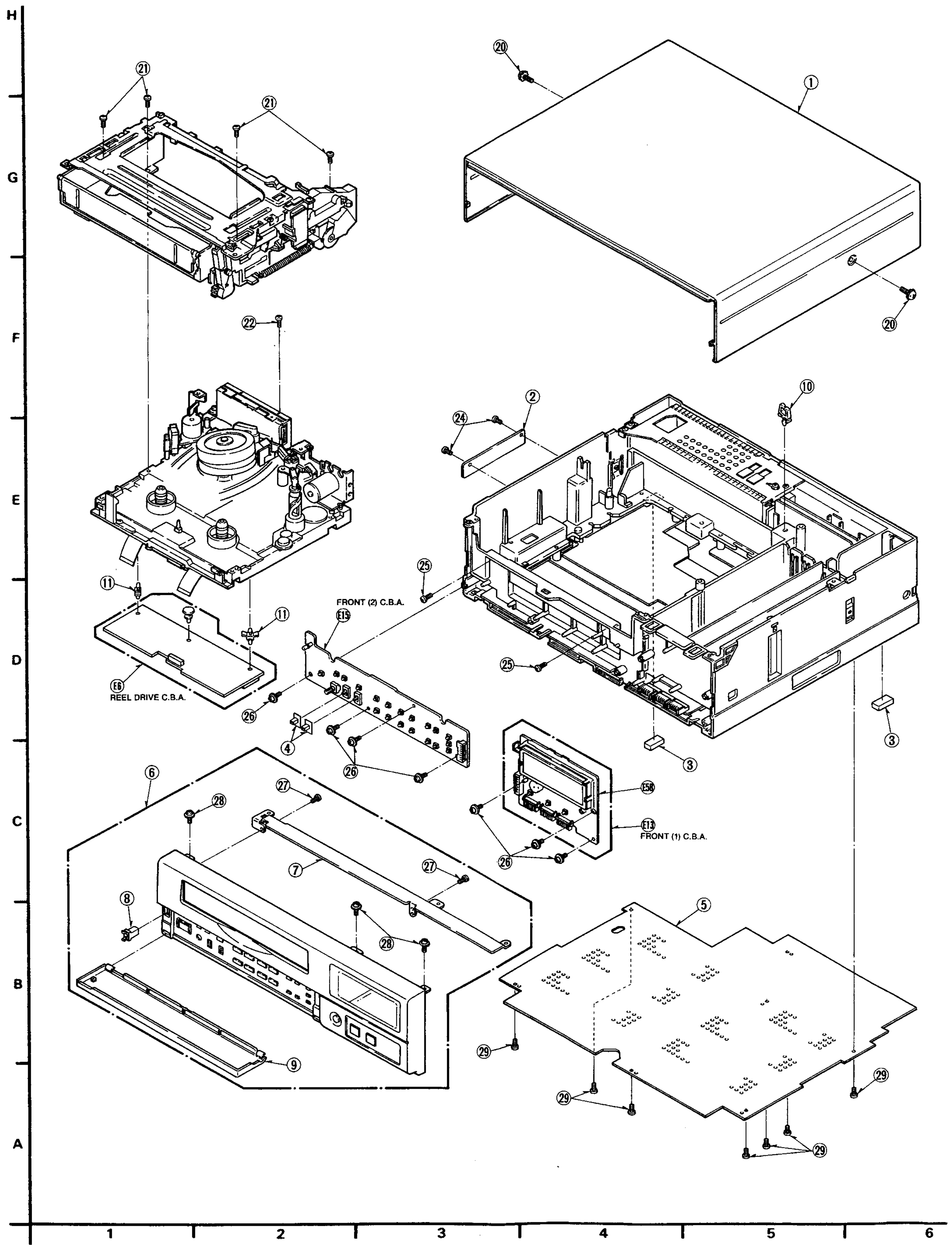
4. Chassis & Frame Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
4-1		VGH3071	INLET PLATE (T)	1	
4-2		VMP3838	POWER SHIELD CASE (REAR)	1	
4-3		VMC0357	TR SPRING	2	
4-4		VSC3735	POWER SHIELD CASE (UPPER)	1	<!>
4-5		VSC3736	POWER SHIELD CASE (LOWER)	1	
4-6		VMZ2031	INSULATION SHEET	1	
4-7		VSC3737	POWER SHIELD CASE (FRONT)	1	
4-8		VSC3738	HEAT SINK	1	
4-9		VMC0907	HEAT SINK SPRING	1	
4-10		VGH3068	REAR JACK PLATE	1	
4-11		VJH0676	REAR JACK ANGLE	1	
4-12		VMP3835	ORNAMENTAL PLATE	1	
4-13		VMP3844	C.B. HOLDER (B)	1	
4-14		VMX2201	C.B. CUSHION (B)	1	
4-15		VMP3841	SIDE ANGLE UNIT	2	
4-16		VMP3843	C.B. HOLDER (A)	1	
4-17		VMX2200	C.B. CUSHION (A)	1	
4-18		VMZ2061	INSULATION SHEET	1	
4-19		VMP3842	SHIELD PLATE	1	
4-20		VJH0082	EARTH TERMINAL	1	
4-30		XTV3+8JFZ	SCREW	2	
4-31		XYE3+EF8	SCREW	1	
4-32		XTV3+10GR	SCREW	17	
4-33		XTV3+8F	SCREW	3	
4-34		XTV3+8FFZ	SCREW	12	
4-35		XTV3+8FR	SCREW	4	
4-36		XTV3+8GFZ	SCREW	2	
4-37		VMX1558	NYLON WASHER	3	
4-38		XTV3+10FFZ	SCREW	1	
4-39		XYE3+EF8R	SCREW	2	
4-40		XYE4+EF5	SCREW	1	
4-41		VJP2374	AC INLET	2	<!>

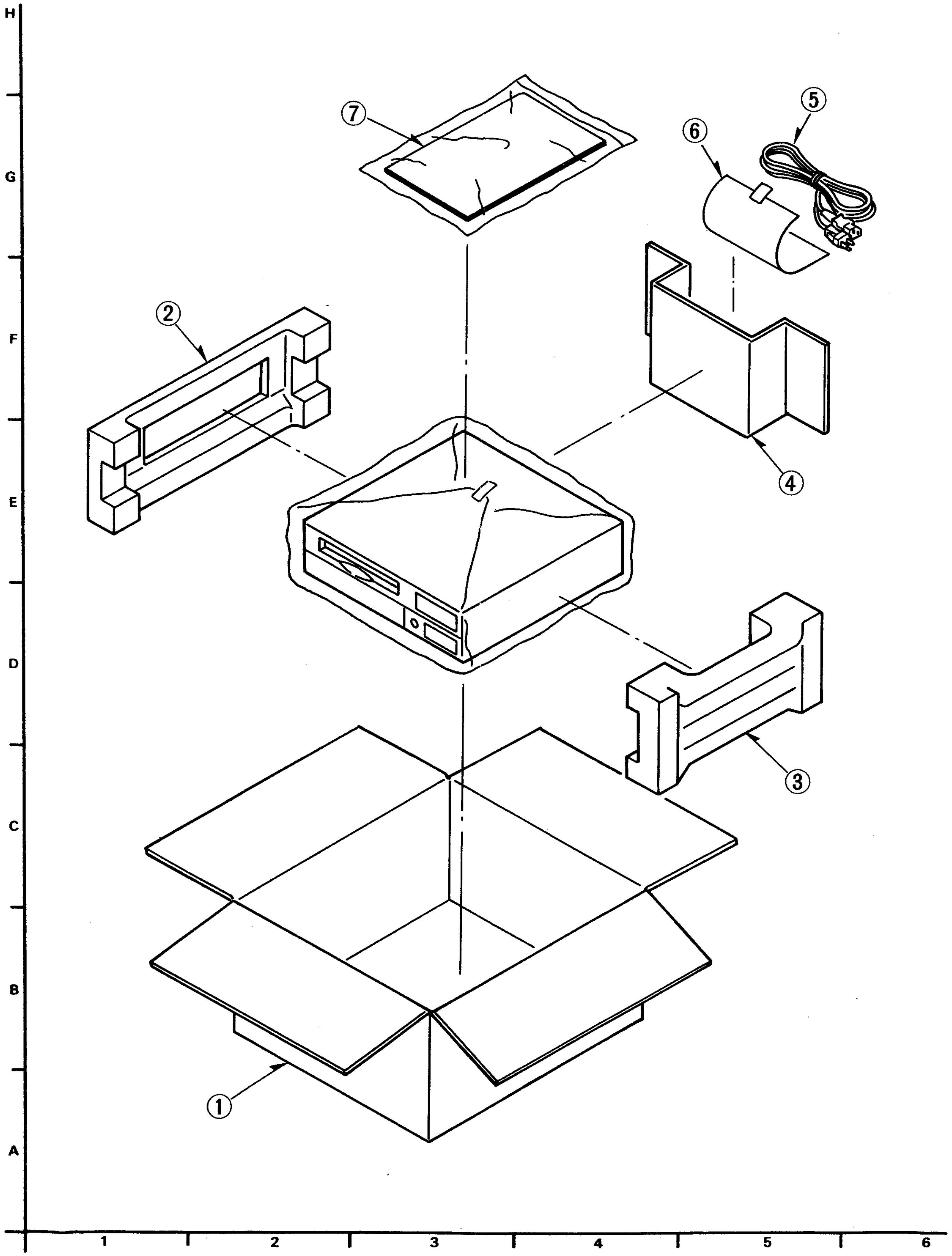
5. Casing Parts Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
5-1		VGM0954	TOP PANEL	1	
5-2		VGK2066	VOLUME COVER	1	
5-3		VMX2174	RUBBER FOOT	2	
5-4		VGU6015	SLIDE KNOB	2	
5-5		VKU0377	BOTTOM PLATE	1	
5-6		VYP5166	FRONT PANEL UNIT	1	
5-7		VMP3833	FRONT SUPPORT ANGLE	1	
5-8		VGQ2925	LATCH	1	
5-9		VYF1902	FRONT COVER	1	
5-10		VJF0004	MINI CLAMPER	1	
5-11		VJF0726	SUPPORT	2	
5-20		VHD0426	SCREW	2	
5-21		XTV26+8FR	SCREW	4	
5-22		XTV4+12J	SCREW	1	
5-24		XTV3+6JFZ	SCREW	2	
5-25		XTV4+8F	SCREW	2	
5-26		XTV4+10JR	SCREW	7	
5-27		XTV3+8J	SCREW	2	
5-28		XTW3+10PR	SCREW	3	
5-29		XTV3+10J	SCREW	7	

❺ Casing Parts Section



❻ *Packing Parts Section*



6. Packing Parts Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
6-1		VPG6530	PACKING CASE	1	
6-2		VPN3481	CUSHION (LEFT)	1	
6-3		VPN3482	CUSHION (RIGHT)	1	
6-4		VPN3517	PAD	1	
6-5		VJA0746	POWER CORD	1	<!> ROUND PIN
6-5		VJA0738	POWER CORD	1	<!> SQUARE PIN
6-6		VPF0136	POWER CORD SHEET	1	
6-7		VQT4864	OPERATING INSTRUCTIONS (ENGLISH)	1	<!>
6-7		VQT5236	OPERATING INSTRUCTIONS (GERMAN)	1	<!>
6-7		VQT4865	OPERATING INSTRUCTIONS (FRENCH)	1	<!>

ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E1		VEP01516A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			POWER SUPPLY (1)		
E2		VEP01517A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			POWER SUPPLY (2)		
E5		VEP02398D	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			SERVO		
E6		VEP02399A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			REEL DRIVE		
E13		VEP06826G	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			FRONT (1)		
E15		VEP06834A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			FRONT (2)		
E14		VEP06827E	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			SYSCON		
E9		VEP03950B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			VIDEO (3)		
E8		VEP03951B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			VIDEO (2)		
E12		VEP05137L	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			HEAD AMP		
E3		VEP00S47B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			MOTHER		
E16		VEP04385E	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			REAR JACK		
E11		VEP04389C	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			AUDIO		
E17		VEP04387A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			MIC AMP SUB		
E4		VEP00S71B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			BACK UP SUB		
E23		VEK3578	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			PHOTO TR (L) UNIT		
E28		VEK4676	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			PHOTO TR (R) UNIT		
E25		VEK2657	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			TENSION SENSOR UINT		
E26		VEK4265	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			REV.TENSION SENSOR UNIT		
E27		VEK6042	P.C.BOARD W/COMPONENT	1	(RTL)<R>
			MOTOR BASE		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP01516A	P.C.BOARD W/COMPONENT		(RTL)<R>
			POWER SUPPLY (1)		
			CAPACITORS		
C1004		ECQU2A224MN	P.CAPACITOR 250V 0.22U	1	<!>
C1005		VCK0044	C.CAPACITOR	1	<!>
C1007		ECEA1AGE101	E.CAPACITOR 10V 100U	1	
C1008		ECQU2A224MN	P.CAPACITOR 250V 0.22U	1	<!>
C1009		ECEA1CGE101	E.CAPACITOR 16V 100U	1	
C1010		VCK0046	.CAPACITOR V	1	<!>
C1011		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1012		ECOS2GA121BB	E.CAPACITOR 400V 120U	1	
C1013		ECQE6473MZ	P.CAPACITOR 630V 0.047U	1	
C1014		ECKD3D151KB	C.CAPACITOR 2KV 150P	1	
C1015		ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1017		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C1018		ECA1CXLV101	E.CAPACITOR 16V 100U	1	
C1019		ECA1AFZ331	E.CAPACITOR 10V 330U	1	
C1020		ECEA1AGE471	E.CAPACITOR 10V 470U	1	
C1021		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C1022-25		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	4	
C1026		ECEA1HFS101	E.CAPACITOR 50V 100U	1	
C1027		ECA1VFQ681	E.CAPACITOR 35V 680U	1	
C1028		ECEA1VGE471	E.CAPACITOR 35V 470U	1	
C1029		ECEA1CGE102	E.CAPACITOR 16V 1000U	1	
C1030		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1031		ECA1EFZ471	E.CAPACITOR 25V 470U	1	
C1032		ECEA1EGE471	E.CAPACITOR 25V 470U	1	
C1033		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1034		ECA1AFZ122	E.CAPACITOR 10V 1200U	1	
C1035		ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C1038		VCK0046	C.CAPACITOR	1	
D1001		RB154LF-B	DIODE	1	<R>
D1005		MA723VT	DIODE	1	(VT)<R>
D1006		AK04	DIODE	1	<R>
D1007		VSD0001	DIODE	1	<R>
D1008		RL4Z	DIODE	1	<R>
D1010,11		FMLG12SP	DIODE	2	<R>
D1012		UPC1093J	IC	1	<R>
D1014		AP01C	DIODE	1	<R>
D1015		VSD0001	DIODE	1	<R>
D1016		MA4200H	DIODE	1	<R>
D1017		FMLG12SP	DIODE	1	<R>
IC1001		STRS6545LF	IC	1	<R>
IC1002		SI3120CA	IC	1	<R>
IC1003		SI3050C	IC	1	<R>
IC1005		AN7812	IC	1	<R>
L1002		ELF18D417	COIL	1	
L1003		VLP0074	COIL	1	
L1004		VLQ0410	COIL	1	
L1005,06		VLQ0354	COIL	2	
L1008		VLQEL06F101K	COIL 100UH	1	
L1009		VLP0083	FILTER	1	
P1002,03		VJP3324	CONNECTOR (MALE)	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q1001		PC111A	PHOTO COUPLER	1	<R>
			RESISTORS		
R1003		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R1005		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1006		ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1007		ERDS2FJ561	C.RESISTOR 1/4W 560	1	
R1008		ERDS2FJ471	C.RESISTOR 1/4W 470	1	
R1009		ERW1PK1R0	W.RESISTOR 1W 1	1	
R1010		ERDS2FJ682	C.RESISTOR 1/4W 6.8K	1	
R1011		ERDS2FJ101	C.RESISTOR 1/4W 100	1	
R1012		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1013		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1014		ERDS2FJ561	C.RESISTOR 1/4W 560	1	
R1015		EROS2CKG1801	M.RESISTOR 1/4W 1.8K	1	
R1016		ERDS2T0	C.RESISTOR 1/4W 0	1	
R1017		EROS2CKG1301	M.RESISTOR 1/4W 1.3K	1	
R1020		EROS2CKG22R0	M.RESISTOR 1/4W 22.0	1	
R1021		EROS2CKG1201	M.RESISTOR 1/4W 1.2K	1	
R1025		ERD2FCJ4R7	C.RESISTOR 1/4W 4.7	1	
R1026		ERF5AK2R2	W.RESISTOR 5W 2.2	1	
R1027		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
T1001		VLT0691	TRANSFORMER	1	<!>
			MISCELLANEOUS		
E30		VMC0811	SPRING	1	
E31		VMZ0965	CAPACITANCE COVER	3	
E32		VMZ1305	CAPACITANCE COVER	2	
E33		VSC3487	HEAT SINK	1	
E34		VSC3434	SHIELD CASE	1	
E35		XTV3+6F	SCREW	1	
	■	VEP01517A	P.C.BOARD W/COMPONENT		(RTL)<R>
			POWER SUPPLY (2)		
			CAPACITORS		
C1001-03		VCK0046	C.CAPACITOR	3	
C1006		VCK0046	C.CAPACITOR	1	
C1036		VCK0046	C.CAPACITOR	1	
C1037		VCC0024	C.CAPACITOR 2200P	1	
F1001		VSF0106C20H	FUSE	1	<!>
L1001		ELF18D417	COIL	1	
P1001		VJP2638	CONNECTOR (MALE)	1	
			RESISTORS		
R1002		ERC12GM334	S.RESISTOR 1/2W 330K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
E36		VJF0318	FUSE HOLDER	2	
E37		VMZ0429	FUSE COVER	1	
E31		VMZ0965	CAPACITANCE COVER	5	
		VMZ1608	CAPACITANCE COVER	1	
	■	VEP02398D	P.C.BOARD W/COMPONENT		(RTL)<R>
			SERVO		
			CAPACITORS		
C2001		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C2002		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C2003		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C2004		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2005		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2006		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C2007		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2009		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C2010		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C2011		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C2012		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C2013		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2014		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2015		ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C2016		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2017		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2019		ECQB1H472JF	P.CAPACITOR 50V 4700P	1	
C2021		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C2022		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2023		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2024		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C2025		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2026		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C2027		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C2028		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2029,30		ECEA1EKN3R3	E.CAPACITOR 25V 3.3U	2	
C2031		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C2032		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2034		ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
C2036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2037		ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C2038		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2039		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2041-45		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	5	
C2046		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2047		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C2048		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2049,50		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C2051,52		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C2053		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2054		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C2055		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2056		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2301		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2302		ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	1	
C2303-06		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	4	
C2307		ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
C2308,09		ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	2	
C2310		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C2311		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2312		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2313		ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2314		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2315		ECUM1H333ZFN	C.CAPACITOR CH 50V 0.033U	1	
C2316		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2317-19		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3	
C2320-23		ECUM1H333ZFN	C.CAPACITOR CH 50V 0.033U	4	
C2324		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2325		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C2326,27		ECEA0JKA470	E.CAPACITOR 6.3V 47U	2	
C2328		ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C2329,30		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C2331		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2332		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2333		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2334		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2335		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2336		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2337,38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C2339		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2901		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2902		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2903		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C2904		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C2905		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C2906		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2907		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2908		ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2909		ECEA1EU101	E.CAPACITOR 25V 100U	1	
C2910		ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C2911		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2912		ECEA1EU101	E.CAPACITOR 25V 100U	1	
C2913		ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C2914		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2915-17		ECEA1EU101	E.CAPACITOR 25V 100U	3	
C2918		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2919		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2920		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2921		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2922		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2923		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2924,25		ECEA1CKA101	E.CAPACITOR 16V 100U	2	
C2926		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C2927-29		ECEA1EU101	E.CAPACITOR 25V 100U	3	
D2001,02		MA151WK	DIODE	2	<R>
D2004,05		MA701	DIODE	2	<R>
D2006		MA151WK	DIODE	1	<R>
D2304,05		MA153	DIODE	2	<R>
D2306		MA4062M	DIODE	1	<R>
D2901		MA3140-M	DIODE	1	<R>
D2902		11DQ04	DIODE	1	<R>
D2903		MA3160-L	DIODE	1	<R>
D2904		11DQ04	DIODE	1	<R>
D2905		MA3160-L	DIODE	1	<R>
D2906		11DQ04	DIODE	1	<R>
D2907		MA701	DIODE	1	<R>
D2908		8P2M	DIODE	1	<R>
D2909		MA3020	DIODE	1	<R>
D2910,11		MA151K	DIODE	2	<R>
D2912		MA4140-M	DIODE	1	<R>
D2913		MA3140-M	DIODE	1	<R>
D2914-16		MA3160-H	DIODE	3	<R>
D2917-19		MA151K	DIODE	3	<R>
D2920		MA3062M	DIODE	1	<R>
FL2001		VLF0634	FILTER	1	
FL2002-04		VLF0630	FILTER	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC2001		MN6743VRRW	IC	1	<R>
IC2003		MN1280R	IC	1	<R>
IC2004		AN3727S	IC	1	<R>
IC2006		TC4S30F	IC	1	<R>
IC2007		MC14011BF	IC	1	<R>
IC2010		UPC358G2	IC	1	<R>
IC2011		MC14070BF	IC	1	<R>
IC2012		MC14011BF	IC	1	<R>
IC2014		LM393PS	IC	1	<R>
IC2015		TC4S66F	IC	1	<R>
IC2301		AN3815K	IC	1	<R>
IC2302		XRA6435S	IC	1	<R>
IC2303		LM358PS	IC	1	<R>
IC2304		LM393PS	IC	1	<R>
IC2305,06		UPC4556G2	IC	2	<R>
IC2307		AN78N12	IC	1	<R>
IC2901		BA6149LS	IC	1	<R>
IC2902		LM393PS	IC	1	<R>
J1		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L2001-06		VLQ0460	COIL	6	
L2007,08		VLQEL05K221J	COIL 220UH	2	
L2010,11		VLQEL05K221J	COIL 220UH	2	
L2301,02		VLQ0460	COIL	2	
L2304		VLQ0460	COIL	1	
L2901		VLQ0460	COIL	1	
L2902		VLQ0128	COIL 47UH	1	
L2903		VLQ0129	COIL 300UH	1	
L2904,05		ELC10E014	COIL 330UH	2	
P2001-03		VJS3215B012	CONNECTOR (FEMALE)	3	
P2004		VJP1230T	CONNECTOR(MALE) 3P	1	
P2005		VJP1235T	CONNECTOR(MALE) 8P	1	
P2006		VJS2149W	CONNECTOR (FEMALE)	1	
P2301		VJP3078	CONNECTOR (MALE)	1	
P2302		VJS1477	CONNECTOR(FEMALE)	1	
Q2001		2SC2295	TRANSISTOR	1	<R>
Q2004		MSD601-R	TRANSISTOR	1	<R>
Q2901		MSB709-R	TRANSISTOR	1	<R>
Q2902,03		2SD601A	TRANSISTOR CHIP	2	<R>
Q2904		2SB1151	TRANSISTOR	1	<R>
Q2905,06		MSB709-R	TRANSISTOR	2	<R>
Q2907		2SB772	TRANSISTOR	1	<R>
Q2908,09		MSB709-R	TRANSISTOR	2	<R>
Q2910		2SB772	TRANSISTOR	1	<R>
Q2911		MSD601-R	TRANSISTOR	1	<R>
Q2912		2SD1275	TRANSISTOR	1	<R>
QR2001,02		MRN1404	TRANSISTOR	2	<R>
QR2003		MRN1402	TRANSISTOR	1	<R>
QR2005		MRN1404	TRANSISTOR	1	<R>
QR2901,02		MRN1404	TRANSISTOR	2	<R>
QR2903,04		MRN2404	TRANSISTOR	2	<R>
			RESISTORS		
R2001		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2002		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2003,04		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R2005		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2006		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R2007,08		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2009		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2010,11		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R2013		ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R2014		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2015,16		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R2017		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R2018,19		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R2020		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R2022		ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R2023		ERJ6GEYG622	M.RESISTOR CH 1/10W 6.2K	1	
R2025		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2026		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2027		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2028,29		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R2036-39		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	4	
R2040		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R2041		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2042		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2043-46		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	4	
R2047		ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R2048-50		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	3	
R2051		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2052		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2053,54		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R2055		ERJ6GEYG333	M.RESISTOR CH 1/10W 33K	1	
R2056		ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R2057		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2058,59		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R2060		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2061		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R2062		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R2063		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R2301		ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R2302		ERX12SJR68	M.RESISTOR 1/2W 0.68	1	
R2303,04		ERDS2TJ150	C.RESISTOR 1/4W 15	2	
R2305		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2306		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2307,08		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	2	
R2309		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2310		ERJ6GEYG242	M.RESISTOR CH 1/10W 2.4K	1	
R2311		ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R2312		ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R2313		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2314		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2315		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2316		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2317		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2318		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R2319-21		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R2322		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2323		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2324		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2325-28		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R2329,30		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R2331		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R2332		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R2333		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2334		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R2335		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R2336		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2901		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R2902		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2903		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R2904		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R2905,06		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2907		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R2908		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2909-12		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R2913		ERDS2TJ270	C.RESISTOR 1/4W 27	1	
R2914		ERG2SJ561	M.RESISTOR 2W 560	1	
R2915		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2916		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R2917-19		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R2920		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2921		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R2922		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2923		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R2924		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2925		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R2926-28		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R2929		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2930		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R2931		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2932		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R2933		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2934,35		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2936		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R2937-39		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R2940		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2941		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R2942-44		ERJ6GEYG271	M.RESISTOR CH 1/10W 270	3	
R2945,46		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2947		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R2949-51		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R2952		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
SW2001		VSS0160	SWITCH	1	<R>
VR2001		EVN49CA00B23	V.RESISTOR 2K	1	
VR2002		EVN49CA00B15	V.RESISTOR 100K	1	
VR2004		EVN49CA00B15	V.RESISTOR 100K	1	
VR2007,08		EVN49CA00B15	V.RESISTOR 100K	2	
VR2010		EVMF6SA00B15	V.RESISTOR 100K	1	
X2002		VSX0296	CRYSTAL OSCILLATOR	1	<R>
X2901		VSX0136	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
E42		VKC0271	HINGE CLIP	2	
		VWJ04CN100CA	FLEXIBLE WIRE	1	
E43		VSC1215	HEAT SINK	2	
E44		VMC0075	HEAT SINK SPRING	1	
E45		VMC0493	HEAT SINK SPRING	1	
		VWJ12AW080MM	FLEXIBLE WIRE	3	
E46		VJF0816	CLAMPER	2	
E47		VMX0985	P.C.B. SPACER	1	
	■	VEP02399A	P.C.BOARD W/COMPONENT		(RTL)<R>
			REEL DRIVE		
			CAPACITORS		
C2701		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C2702		ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2703		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2704		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2705		ECQV1H564JZ	P.CAPACITOR 50V 0.56U	1	
C2706-08		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3	
C2709-12		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2713		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2714		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2715-17		ECEA0JKA470	E.CAPACITOR 6.3V 47U	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2718		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C2719		ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2720		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2721		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2722		ECQV1H564JZ	P.CAPACITOR 50V 0.56U	1	
C2723-25		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3	
C2726-29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
D2701		MA151K	DIODE	1	<R>
D2702		MA151WK	DIODE	1	<R>
D2703		MA151K	DIODE	1	<R>
D2704		MA153	DIODE	1	<R>
D2705		MA151K	DIODE	1	<R>
D2706		MA151WK	DIODE	1	<R>
D2707		MA151K	DIODE	1	<R>
D2708		MA153	DIODE	1	<R>
IC2701,02		XRA6435S	IC	2	<R>
IC2703		LM358PS	IC	1	<R>
IC2704		MC14053BF	IC	1	(R)<R>
IC2705		LM339NS	IC	1	<R>
IC2706		LM358PS	IC	1	<R>
J2701		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L2701-04		VLQ0460	COIL	4	
P2701		VJS3135	CONNECTOR (FEMALE)	1	
P2702		VJS2149W	CONNECTOR (FEMALE)	1	
P2703		VJS3202B008	CONNECTOR (FEMALE)	1	
P2704,05		VJS1412	CONNECTOR(FEMALE)	2	
Q2701		MSD601-R	TRANSISTOR	1	<R>
QR2701		MRN1404	TRANSISTOR	1	<R>
			RESISTORS		
R2701		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2702,03		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2704		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2705		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R2706		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2707,08		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2709		ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R2710		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R2711		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2712		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2713,14		ERDS2TJ330	C.RESISTOR 1/4W 33	2	
R2715		ERX12SJ1R0	M.RESISTOR 1/2W 1	1	
R2716		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2717		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R2718		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R2719		ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R2720		ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R2721		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2722,23		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R2724		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2725,26		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R2727		ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2728		ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R2729,30		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R2731		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2732		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2733		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2734,35		ERDS2TJ330	C.RESISTOR 1/4W 33	2	
R2736		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2737		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2738		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R2739		ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R2740		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R2741,42		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R2743		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
			MISCELLANEOUS		
		VMX2183	SPACER	1	
	■	VEP06826G	P.C.BOARD W/COMPONENT		(RTL)<R>
			FRONT (1)		
BZ6601		VSQ0813	BUZZER	1	
			CAPACITORS		
C6601		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6602		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C6603		ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C6604		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6605		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C6606		ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C6607		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C6608		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6610		ECEA1HKS220	E.CAPACITOR 50V 22U	1	
C6611		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C6612		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6613		ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C6614-16		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3	
C6617		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
CT6601,02		ECRHA030E41	TRIMMER 3P	2	
D6601		MA4075	DIODE	1	<R>
D6606,07		MA151K	DIODE	2	<R>
D6608-12		MA152K	DIODE	5	<R>
D6613-15		MA151K	DIODE	3	<R>
DP6601		VSL0132	DISPLAY TUBE	1	
IC6602		UPD6252GS	IC	1	<R>
IC6603		MN1280L	IC	1	<R>
IC6604		MN1280R	IC	1	<R>
IC6606		MC74HC4053F	IC	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
J6602		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
P6601-03		VJP3152	CONNECTOR (MALE)	3	
P6604		VJP2652	CONNECTOR	1	
Q6601,02		MSD602-R	TRANSISTOR	2	<R>
Q6604		MSB709-R	TRANSISTOR	1	<R>
Q6606		MSB709-R	TRANSISTOR	1	<R>
QR6601		MRN1404	TRANSISTOR	1	<R>
QR6602,03		MRN2404	TRANSISTOR	2	<R>
QR6604		MRN1404	TRANSISTOR	1	<R>
			RESISTORS		
R6601		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6603		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6604,05		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R6606		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6607,08		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6609		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R6610		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6611-13		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R6614-21		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R6622-35		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	14	
R6636		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R6637		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6638-41		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	4	
R6642		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6643		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R6644		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6645-53		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	9	
R6655		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R6656		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6657-61		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R6662		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6663		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
SW6601-03		EVQQS205K	SWITCH	3	<R>
X6601		VSX0140	CRYSTAL OSCILLATOR	1	<R>
X6602		VSX0094	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
E58		VJF0398	LCD HOLDER	1	
	■	VEP06834A	P.C.BOARD W/COMPONENT		
			FRONT (2)		
D6701-21		MA165VT	DIODE	21	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
LD6701		LN840RCPLS	DIODE	1	
P6701		VJS2652	CONNECTOR (FEMALE)	1	
			RESISTORS		
R6701		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R6703		ERDS2TJ433	C.RESISTOR 1/4W 43K	1	
R6704		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
SW6701-18		EVQQS205K	SWITCH	18	<R>
SW6719,20		VSS0162	SWITCH	2	<R>
SW6721		EVQQS205K	SWITCH	1	<R>
VR6701		EVUJ16E04B24	V.RESISTOR 20K	1	
			MISCELLANEOUS		
E59		VMX1436	LED SPACER	1	
E60		VMX0473	LED HOLDER	1	
	■	VEP06827E	P.C.BOARD W/COMPONENT		(RTL)<R>
			SYSCON		
			CAPACITORS		
C2501		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C2502		ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2503		ECQB1H273JF	P.CAPACITOR 50V 0.027U	1	
C2504		ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2510		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C2512-14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C2516-19		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C6001		ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C6002,03		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
C6006		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6007,08		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6009		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C6010		ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C6011		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6013,14		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6036		ECEA1CU222	E.CAPACITOR 16V 2200U	1	
C6038,39		ECEA0JU332	E.CAPACITOR 6.3V 3300U	2	
C6040		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6041		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C6042		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6043		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6044-46		ECQB1H102JF	P.CAPACITOR 50V 1000P	3	
C6047		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6048		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6049		ECQB1H102JF	P.CAPACITOR 50V 1000P	1	
C6050		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6051		ECEA1CU331	E.CAPACITOR 16V 330U	1	
C6052		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6053,54		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C6055		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6056,57		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C6058		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6059		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6060		ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C6061,62		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6064		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
D2501,02		MA151K	DIODE	2	<R>
D6001-04		MA151K	DIODE	4	<R>
D6007,08		11EQS04	DIODE	2	<R>
D6009		MA151K	DIODE	1	<R>
D6010		MA170	DIODE	1	<R>
FL6001		VLF0634	FILTER	1	
IC2501,02		LM324NS	IC	2	<R>
IC2503		LM393PS	IC	1	<R>
IC2505		MC14053BF	IC	1	<R>
IC2506		MC14052BF	IC	1	<R>
IC2507		MC14053BF	IC	1	<R>
IC6001		MN188166VMCG	IC	1	<R>
IC6002		MN1280R	IC	1	<R>
IC6003		MN1280-U	IC	1	<R>
IC6004		LM393PS	IC	1	<R>
IC6005		UPD4019BG	IC	1	<R>
IC6006		LM393PS	IC	1	<R>
IC6007		MC14053BF	IC	1	<R>
IC6008		MC14001BF	IC	1	<R>
IC6009		MC14538BF	IC	1	<R>
IC6010		M54649L	IC	1	<R>
IC6011		LM324NS	IC	1	<R>
J1-J9		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	9	
J10		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L2502		VLQ0460	COIL	1	
L6001		VLQ0460	COIL	1	
P6002		VJP3176B064	CONNECTOR (MALE)	1	
P6003		VJS2163W	CONNECTOR (FEMALE)	1	
Q6001		2SD973	TRANSISTOR	1	<R>
Q6002		MSB709-R	TRANSISTOR	1	<R>
Q6003		2SB819-PQR	TRANSISTOR	1	<R>
Q6004		MSD601-R	TRANSISTOR	1	<R>
Q6005		2SB819-PQR	TRANSISTOR	1	<R>
Q6006-08		MSD601-R	TRANSISTOR	3	<R>
QR2501-05		MRN1404	TRANSISTOR	5	<R>
QR6001		MRN2402	TRANSISTOR	1	<R>
QR6002		MRN1403	TRANSISTOR	1	<R>
QR6003,04		MRN2402	TRANSISTOR	2	<R>
QR6005-09		MRN1402	TRANSISTOR	5	<R>
QR6205		MRN2404	TRANSISTOR	1	<R>
QR6206,07		MRN1402	TRANSISTOR	2	<R>
QR6208		MRN2404	TRANSISTOR	1	<R>
QR6209		UN2216	TRANSISTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR6210		MRN1402	TRANSISTOR	1	<R>
			RESISTORS		
R2501		ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R2502		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R2503		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R2504		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R2505		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R2506		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R2507-10		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R2511-15		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	5	
R2516		ERJ6GEYG393	M.RESISTOR CH 1/10W 39K	1	
R2517		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2518-20		ERJ6GEYG124	M.RESISTOR CH 1/10W 120K	3	
R2521		ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R2522		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2523,24		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R2525		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R2526		ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R2528		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6001		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R6002		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R6003		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6004		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6005		ERJ6GEYJ564	M.RESISTOR CH 1/10W 560K	1	
R6006		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6007		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R6008		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6009		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6010		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R6011		ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R6012,13		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6014-18		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R6019		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R6020,21		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R6022-26		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R6027,28		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	2	
R6029		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R6030		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R6031		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R6032-34		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R6035		ERD2FCG220	C.RESISTOR 2W 22	1	
R6036		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6037		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R6038		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6039,40		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6041		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6042		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R6043		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R6044		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6045,46		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R6047		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R6048		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6049		ERJ6GEYG302	M.RESISTOR CH 1/10W 3K	1	
R6050		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6051,52		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6053-59		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	7	
R6070		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6071		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6073		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6074		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6075		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R6076		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R6077		ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R6078,79		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R6080		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6081		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6082		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R6083		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6084		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R6085		ERD2FCG220	C.RESISTOR 2W 22	1	
R6204,05		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R6206		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6207		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6208		ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R6210		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R6211		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
X6001		VSX0230	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
		VWJ04CN180CA	FLEXIBLE WIRE	1	
	■	VEP03950B	P.C.BOARD W/COMPONENT		(RTL)<R>
			VIDEO (3)		
			CAPACITORS		
C3001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3002		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3004		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3005		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3006		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3007		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3008		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C3013		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C3014,15		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	2	
C3016		ECEA1CU220	E.CAPACITOR 16V 22U	1	
C3017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3018		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3019		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3020		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3021		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C3022		ECEA1HU010	E.CAPACITOR 50V 1U	1	
C3023		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3025		ECEA1HUR22	E.CAPACITOR 50V 0.22U	1	
C3026		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C3029		ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C3030		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C3031		ECEA0JU101	E.CAPACITOR 6.3V 100U	1	
C3032		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3033		ECEA1HU010	E.CAPACITOR 50V 1U	1	
C3034		ECQP1H392JZ	P.CAPACITOR 50V 3900P	1	
C3035		ECEA1CU330	E.CAPACITOR 16V 33U	1	
C3036		ECEA1HKGR68	E.CAPACITOR 50V 0.68U	1	
C3037		ECQB1H152JF	P.CAPACITOR 50V 1500P	1	
C3038		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C3039		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3040		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C3041		ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
C3042		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3044		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3045		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3046		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3047		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3048		ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C3049,50		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C3051		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3052		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3053		ECEA0JU101	E.CAPACITOR 6.3V 100U	1	
C3054		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3055		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3056		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3058-60		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C3061		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C3062		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3063,64		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3065		ECEA1HU2R2	E.CAPACITOR 50V 2.2U	1	
C3066,67		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	2	
C3069		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C3070		ECEA1HU2R2	E.CAPACITOR 50V 2.2U	1	
C3071		ECEA1HU010	E.CAPACITOR 50V 1U	1	
C3072		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3073		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3075		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C3076		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3077		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3078		ECUM1H030DCN	C.CAPACITOR CH 50V 3P	1	
C3079,80		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C3081		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C3082		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C3083		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C3084		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3085		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3086		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3087		ECEA1HN2R2S	E.CAPACITOR 50V 2.2U	1	
C3088		ECQB1H562JF	P.CAPACITOR 50V 5600P	1	
C3089		ECEA1CPK470	E.CAPACITOR 16V 47U	1	
C3090		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3091		ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C3092		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C3093		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C3094		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3095		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3096		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3097		ECEA0JN470S	E.CAPACITOR 6.3V 47U	1	
C3099		ECEA0JN470S	E.CAPACITOR 6.3V 47U	1	
C3100		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3101		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3102		ECEA1VU100	E.CAPACITOR 35V 10U	1	
C3103		ECEA1VU220	E.CAPACITOR 35V 22U	1	
C3104		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3105		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3106		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3109		ECEA1CU220	E.CAPACITOR 16V 22U	1	
C3110		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3111		ECEA0JU101	E.CAPACITOR 6.3V 100U	1	
CT3002		ECV1ZW40X60	C.CAPACITOR 40P	1	
D3001		MA28W	DIODE	1	<R>
D3003,04		MA151K	DIODE	2	<R>
D3005		MA3200-M	DIODE	1	<R>
FL3002		VLF0499	FILTER	1	
FL3004		VLF0878	FILTER	1	
FL3005		ELB4M022	FILTER	1	
IC3001		VEFH03D	HIC	1	<R>
IC3003		AN3916	IC	1	<R>
IC3004		MN1280P	IC	1	<R>
IC3005		M50554-001SP	IC	1	<R>
IC3006		UPC78L05J	IC	1	<R>
IC3007		AN3296S	IC	1	<R>
IC3008		MC74HC4053F	IC	1	<R>
IC3009		TC4W53F	IC	1	<R>
IC3011		NJM2233BMA	IC	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
J3001		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J3003,04		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L3002		VLQEL05S101J	COIL 100UH	1	
L3003		VLQEL05S6R8J	COIL 6.8UH	1	
L3004		VLQEL05S101J	COIL 100UH	1	
L3005		VLQEL05S120J	COIL 12UH	1	
L3006-09		VLQEL05S101J	COIL 100UH	4	
L3010,11		VLQEL05S470J	COIL 47UH	2	
L3012		VLQEL05S120J	COIL 12UH	1	
L3013		VLQEL05S101J	COIL 100UH	1	
L3015		VLQEL05S820J	COIL 82UH	1	
L3016,17		VLQEL05S101J	COIL 100UH	2	
L3018		VLQEL05S220J	COIL 22UH	1	
L3019		VLQEL05S2R2J	COIL 2.2UH	1	
L3020		VLQEL05S101J	COIL 100UH	1	
L3022		VLQEL05S101J	COIL 100UH	1	
L3024		VLQEL05S680J	COIL 68UH	1	
L3025		VLQEL05S101J	COIL 100UH	1	
P3001		VJP3176B064	CONNECTOR (MALE)	1	
Q3001		MSC2295-B	TRANSISTOR	1	<R>
Q3002		MSD601-R	TRANSISTOR	1	<R>
Q3003		MSC2295-B	TRANSISTOR	1	<R>
Q3005		2SD1328	TRANSISTOR CHIP	1	<R>
Q3006		MSD601-R	TRANSISTOR	1	<R>
Q3007		MSB709-R	TRANSISTOR	1	<R>
Q3008-11		MSD601-R	TRANSISTOR	4	<R>
Q3012		MSB709-R	TRANSISTOR	1	<R>
Q3013-16		MSD601-R	TRANSISTOR	4	<R>
Q3017,18		MSB709-R	TRANSISTOR	2	<R>
Q3019		2SB641	TRANSISTOR	1	(Q,R,S)<R>
Q3020		MSD601-R	TRANSISTOR	1	<R>
Q3021		MSB709-R	TRANSISTOR	1	<R>
Q3022		MSD601-R	TRANSISTOR	1	<R>
Q3023		MSB709-R	TRANSISTOR	1	<R>
Q3024,25		MSD601-R	TRANSISTOR	2	<R>
Q3026		2SA1022-B	TRANSISTOR CHIP	1	(B,C)<R>
Q3027		MSC2295-B	TRANSISTOR	1	<R>
QR3001,02		MRN1404	TRANSISTOR	2	<R>
QR3004		MRN1404	TRANSISTOR	1	<R>
QR3005		XN1213	TRANSISTOR-TRANSISTOR	1	<R>
			RESISTORS		
R3001		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3002		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R3006		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R3007		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R3008,09		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R3013-16		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R3017,18		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R3019		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3020		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3021		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3022		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3023		ERJ6GEYJ564	M.RESISTOR CH 1/10W 560K	1	
R3024		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3025		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3029		ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R3030		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3031		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3032		ERJ6GEYJ753	M.RESISTOR CH 1/10W 75K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3033		ERJ6GEYG113	M.RESISTOR CH 1/10W 11K	1	
R3034		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3035		ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R3036		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3037		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3038		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R3040-42		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R3043		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3044		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3045		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3046		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R3047,48		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	2	
R3049		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R3050		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R3051		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3052		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3053		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3054		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3055		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3056		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R3057		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3058		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3059		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3060,61		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R3062		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3063		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R3064		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R3065		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3066		ERJ6GEYG822	M.RESISTOR CH 1/10W 8.2K	1	
R3069		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R3070		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3071,72		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R3073		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R3074		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3075		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3077		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R3078		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3079		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3080		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3081		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R3083,84		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R3085		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R3086		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3087		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3088		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R3089		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3090		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3091		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3092,93		ERJ6GEYG911	M.RESISTOR CH 1/10W 910	2	
R3094		ERJ6GEYG112	M.RESISTOR CH 1/10W 1.1K	1	
R3095		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3096		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3097		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3098		ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R3099		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3100,01		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R3102		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3103		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3104,05		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R3106		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3107		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R3108		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3109		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3110		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R3111		ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R3112		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R3114		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3115		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
VR3001		EVN32CA00B52	V.RESISTOR 500	1	
VR3002		EVN32CA00B54	V.RESISTOR 50K	1	
VR3004		EVN32CA00B52	V.RESISTOR 500	1	
VR3006		EVN32CA00B13	V.RESISTOR 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
X3001		VSX0316	CRYSTAL OSCILLATOR	1	(RTL)<R>
	■	VEP03951B	P.C.BOARD W/COMPONENT		(RTL)<R>
			VIDEO (2)		
			CAPACITORS		
C8001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8002		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C8003		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C8004-07		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C8008		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C8009		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C8010,11		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C8012,13		ECEA1CU100	E.CAPACITOR 16V 10U	2	
C8014		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8015,16		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C8018		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C8019		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C8020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8021		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C8022		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C8023		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C8024		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8026		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8027		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C8028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8029		ECEA0JU101	E.CAPACITOR 6.3V 100U	1	
C8030,31		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C8044		ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C8059		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C8060		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8073		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C8074		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C8075		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C8076		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8077		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C8078		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8079		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C8080		ECUM1H050DCN	C.CAPACITOR CH 50V 50P	1	
C8081		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C8083		ECEA1HU010	E.CAPACITOR 50V 1U	1	
C8084		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C8085,86		ECEA1HU2R2	E.CAPACITOR 50V 2.2U	2	
C8087		ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C8088		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C8090		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C8091		ECEA1AU101	E.CAPACITOR 10V 100U	1	
C8093		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C8094		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C8095		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8096		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C8097		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C8100		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C8101		ECEA1HU010	E.CAPACITOR 50V 1U	1	
C8103		ECUM1E103KBN	C.CAPACITOR CH 25V 0.01U	1	
C8104,05		ECQV1H184JZ	P.CAPACITOR 50V 0.18U	2	
C8106		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C8107		ECQB1H562JF	P.CAPACITOR 50V 5600P	1	
D8001		MA4091	DIODE	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D8006		MA151K	DIODE	1	<R>
D8007		MA153	DIODE	1	<R>
D8008		MA151K	DIODE	1	<R>
FL8001		VLF0727	FILTER	1	
FL8004		VLD0147	DELAY LINE	1	
FL8006		VLF0299	FILTER	1	
IC8001		VEFH04F	P.C.BOARD	1	<R>
IC8002		MSM6965-3RS	IC	1	<R>
IC8003		MC14053BF	IC	1	(R)<R>
J8001,02		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L8001		VLQEL05S820J	COIL 82UH	1	
L8002		VLQEL05S151J	COIL 150UH	1	
L8003		VLQEL05S3R3J	COIL 3.3UH	1	
L8004-06		VLQEL05S101J	COIL 100UH	3	
L8011		VLQEL05S101J	COIL 100UH	1	
L8018		VLQEL05S151J	COIL 150UH	1	
L8019		VLQEL05S270J	COIL 27UH	1	
L8020		VLQEL05S470J	COIL 47UH	1	
L8021,22		VLQEL05S101J	COIL 100UH	2	
L8023		VLQEL05S150J	COIL 15UH	1	
L8026		VLQEL05S681J	COIL 680UH	1	
L8027		VLQEL05S391J	COIL 390UH	1	
L8029		VLQEL05S681J	COIL 680UH	1	
L8030		VLQEL05S560J	COIL 56UH	1	
P8001		VJP3176B064	CONNECTOR (MALE)	1	
P8002		VJP3079	CONNECTOR (MALE)	1	
Q8001,02		MSD601-R	TRANSISTOR	2	<R>
Q8003,04		MSC2295-B	TRANSISTOR	2	<R>
Q8010		2SB644	TRANSISTOR	1	<R>
Q8011		2SB643	TRANSISTOR	1	<R>
Q8016,17		MSD601-R	TRANSISTOR	2	<R>
Q8020,21		MSB709-R	TRANSISTOR	2	<R>
Q8022		MSD601-R	TRANSISTOR	1	<R>
Q8024		MSD601-R	TRANSISTOR	1	<R>
QR8001		MRN14Q2	TRANSISTOR	1	<R>
QR8002		MRN2402	TRANSISTOR	1	<R>
QR8005		MRN1404	TRANSISTOR	1	<R>
QR8007		MRN1403	TRANSISTOR	1	<R>
QR8010,11		XN1213	TRANSISTOR-TRANSISTOR	2	<R>
			RESISTORS		
R8001,02		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R8003		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R8004-06		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R8007-12		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6	
R8013		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8014-18		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R8019		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8020		ERJ6GEYJ820	M.RESISTOR CH 1/10W 82	1	
R8021		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8022		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R8024		ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8025		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R8026,27		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R8039		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R8049		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8050		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8051		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R8052		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R8053		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8054		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R8055		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R8079		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R8080		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R8081		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8082		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8103		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R8104		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R8105		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8106		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8107		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R8108		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8109,10		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R8111		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R8112,13		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R8115		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R8116		ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R8121		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R8122		ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R8124		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8127		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R8128		ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R8130		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R8131		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R8132		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8133		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R8134		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R8135		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R8136		ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R8137		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R8138		ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
VR8001		EVN32CA00B23	V.RESISTOR 2K	1	
VR8002		EVN32CA00B14	V.RESISTOR 10K	1	
X8001		VSX0225	CRYSTAL OSCILLATOR	1	<R>
X8002		VSX0162	CRYSTAL OSCILLATOR	1	<R>
	■	VEP05137L	P.C.BOARD W/COMPONENT		(RTL)<R>
			HEAD AMP		
			CAPACITORS		
C501		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C502		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C505		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C507		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C508		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C509		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C510,11		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	2	
C513		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C514		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C516		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C517		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C518		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C522		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C523		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C524		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C525		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C528		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C530		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C531		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C532		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C533		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C534,35		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C536		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C537		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C538		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C539		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C540		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C541		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
IC501		BA7274S	IC	1	<R>
L501		VLQEL05F101J	COIL 100UH	1	
L503		VLQEL05F270J	COIL 27UH	1	
L504		VLQEL05F101J	COIL 100UH	1	
P501		VJP3079	CONNECTOR (MALE)	1	
P502		VJS1449	CONNECTOR(FEMALE)	1	
Q501		MSB709-R	TRANSISTOR	1	<R>
Q502		MSC2295-B	TRANSISTOR	1	<R>
			RESISTORS		
R501		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R502		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R503		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R504		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R508		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R510		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R512		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R513		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R518		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R519		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R523		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R524		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R525		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R526		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R527		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R528		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R529		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R530		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R531		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R532		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R533		ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R534-36		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	3	
VR501		EVND1AA00B23	V.RESISTOR 2K	1	
VR502		EVND1AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E54		VSC2354	SHIELD CASE	1	
E55		VSC2353	SHIELD CASE (MIDDLE)	1	
E56		VSC2355	SHIELD CASE (UPPER)	1	
	■	VEP00S47B	P.C.BOARD W/COMPONENT		(RTL)<R>
			MOTHER		
P901		VJS1413	CONNECTOR(FEMALE)	1	
P902		VJP1243T	CONNECTOR(MALE) 3P	1	
P911,12		VJS3324	CONNECTOR (FEMALE)	2	
P921		VJS2214	CONNECTOR (FEMALE)	1	
P922-24		VJS3215B012	CONNECTOR (FEMALE)	3	
P932,33		VJS2898A064	CONNECTOR (FEMALE)	2	
P942		VJS2898A032	CONNECTOR (FEMALE)	1	
P943-46		VJS3152	CONNECTOR (FEMALE)	4	
P961		VJS2898A064	CONNECTOR (FEMALE)	1	
P962-64		VJS3152	CONNECTOR (FEMALE)	3	
			MISCELLANEOUS		
E38		VMP3845	ANGLE	1	
E39		VMP3846	ANGLE B	1	
E40		XTV26+8F	SCREW	15	
E41		XNG26BFZ	NUT	2	
		VWJ18AW105MM	FLEXIBLE WIRE	1	
	■	VEP04385E	P.C.BOARD W/COMPONENT		(RTL)<R>
			REAR JACK		
CA4901		VCR0329333MB	IC	1	
J4901		VJS3154	CONNECTOR (FEMALE)	1	
J4911		VJS3154	CONNECTOR (FEMALE)	1	
J4913		VJJ0322	MONITOR JACK	1	
J4914		VJJ0323	AUDIO JACK	1	
J4915		VJH0672A009	TERMINAL	1	
P4901-04		VJP3152	CONNECTOR (MALE)	4	
			RESISTORS		
R4901		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R4911		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
	■	VEP04389C	P.C.BOARD W/COMPONENT		(RTL)<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			AUDIO		
			CAPACITORS		
C4002		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C4003,04		ECEA16M10	E.CAPACITOR 16V 1U	2	
C4005		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4007		ECEA16M10	E.CAPACITOR 16V 1U	1	
C4009		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4010		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4011		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4012		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4013		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4014		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4015,16		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4017		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4018		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4019		ECQB1H562JF	P.CAPACITOR 50V 5600P	1	
C4020		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C4022		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4023		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4024		ECEA1CU471	E.CAPACITOR 16V 470U	1	
C4025		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4026		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4027		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C4028		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4029		ECQP1332JZ	P.CAPACITOR 100V 3300P	1	
C4031		ECCD2H121J	C.CAPACITOR 500V 120P	1	
C4032		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4033		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4035		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4037		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4039		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4040		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
D4001		11EQS04	DIODE	1	<R>
D4002		MA165VT	DIODE	1	<R>
D4003		MA151WK	DIODE	1	<R>
D4005		MA721	DIODE	1	<R>
IC4001		BA7766AS	IC	1	<R>
L4001		VLQEL05S471K	COIL 470UH	1	
L4002		VLQEL07F822J	COIL 8200UH	1	
P4001		VJP3176B032	CONNECTOR (MALE)	1	
P4003		VJP1231T	CONNECTOR(MALE) 4P	1	
Q4002		2SD639-R	TRANSISTOR	1	<R>
Q4003,04		2SD1149-RS	TRANSISTOR	2	<R>
Q4005		2SB710A-RS	TRANSISTOR	1	<R>
Q4006		2SD1328-R	TRANSISTOR CHIP	1	(R,S)<R>
Q4007		MSB709-R	TRANSISTOR	1	<R>
Q4008		2SD1328-R	TRANSISTOR CHIP	1	(R,S)<R>
QR4001		MRN1404	TRANSISTOR	1	<R>
QR4005		MRN1404	TRANSISTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R4002		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4003		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4004		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4005		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R4006		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4008		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4009		ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R4010		ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4011		ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4012		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4013		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R4014		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4015		ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4016		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4017		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4018		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4019		ERJ6GEYG303	M.RESISTOR CH 1/10W 30K	1	
R4020,21		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R4022		ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R4023		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4024		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4025		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4026		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R4027,28		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4030		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R4031		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4033		ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4034		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4035		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4036		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4037		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4038		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4039		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4042		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4046		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4050		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R4051		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4053,54		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4056		ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4057		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
T4001		EIQ7QF014Q	TRANSFORMER	1	
VR4001		EVN32CA00B14	V.RESISTOR 10K	1	
VR4002		EVN32CA00B25	V.RESISTOR 200K	1	
	■	VEP04387A	P.C.BOARD W/COMPONENT		(RTL)<R>
			MIC AMP SUB		
			CAPACITORS		
C4951		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C4952		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C4953		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4954		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4955,56		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
		ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D4951		MA165VT	DIODE	1	<R>
IC4951		VCR0172	IC	1	<R>
J4951		VJJ0351	MIC JACK	1	
J4952		VJJ0352	REMOTE JACK	1	
P4951		VJS2650A008Z	CONNECTOR (FEMALE)	1	
Q4951		2SD636	TRANSISTOR	1	(Q,R,S)<R>
			RESISTORS		
R4951		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R4952		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4953		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R4954		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4955		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4956,57		ERDS2TJ563	C.RESISTOR 1/4W 56K	2	
R4958		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
			MISCELLANEOUS		
E61		VMP3847	MIC ANGLE	1	
		XYE3+EF8	SCREW	2	
	■	VEP00S71B	P.C.BOARD W/COMPONENT		(RTL)<R>
			BACK UP SUB		
BAT2991		VSB0004	BATTERY	1	
P2991		VJP1243T	CONNECTOR(MALE) 3P	1	
	■	VEK3578	P.C.BOARD W/COMPONENT		
			PHOTOR TR (L) UNIT		
C1501		ECKW1H102KB	C.CAPACITOR 50V 1000P	1	
Q1501		PN150NVS	PHOTO TR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
E91		VMD0645	PHOTO TR HOLDER	1	
	■	VEK2657	P.C.BOARD W/COMPONENT	1	
			TENSION SENSOR UNIT		
Q1504		ON1301	PHOTO INTERRUPTOR	1	<R>
R1502		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
	■	VEK4265	P.C.BOARD W/COMPONENT		
			REV TENSION SENSOR UNIT		
E156		VMA7987	REV PHOTO HOLDER	1	
E157		ON1108	PHOTO INTERRUPTOR	1	<R>
E94		XYN26+C5	SCREW	1	
	■	VEK6042	P.C.BOARD W/COMPONENT	1	
			MOTOR BASE		
		VJP1229T	CONNECTOR (MALE) 2P	1	
		VJP1229G	CONNECTOR (MALE) 2P	1	
		VJP3106B013	CONNECTOR (MALE)	1	
		VJS1493	CONNECTOR (FEMALE) 15P	1	
	■	VEK4676	P.C.BOARD W/COMPONENT		
			PHOTO TR (R) UNIT		
C1502		ECKZ1H102KB	C.CAPACITOR 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P1508		VJS2165W	CONNECTOR (FEMALE) 6P	1	
Q1502		PN150NVS	PHOTO TR	1	
R1503		ERDS2TJ222A	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
		VMD0645	HOLDER	1	

Section 9

Rack Mouting Adaptor

AG-M670P

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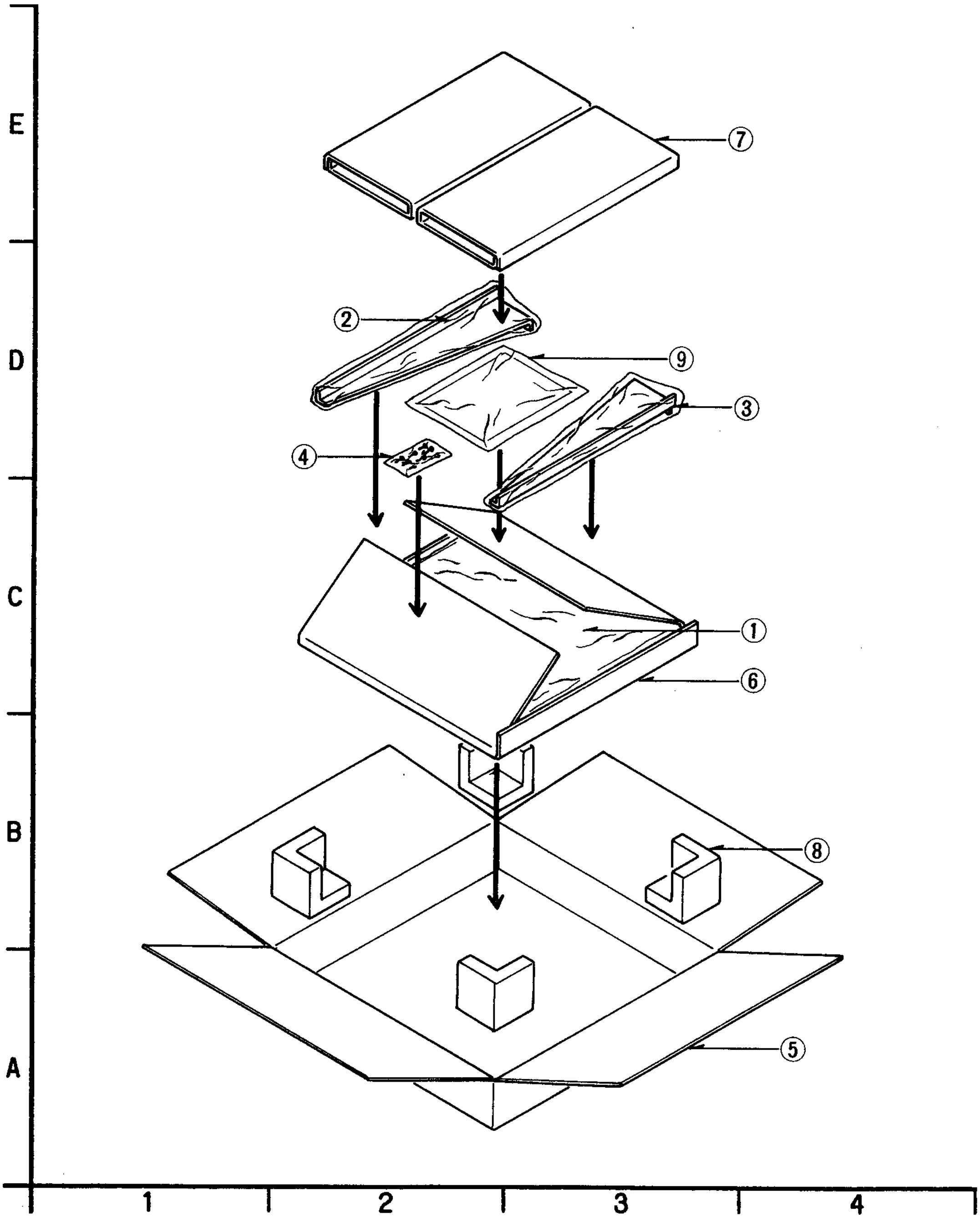
EXPLODED VIEW



REPLACEMENT PARTS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1-1		VMP3921	RACK MOUNTING PLATE	1	
1-2		VMP3922	RACK MOUNTING ANGLE (L)	1	
1-3		VMP3923	RACK MOUNTING ANGLE (R)	1	
1-4		XYN3+C8FCS	SCREW	8	
1-5		VPG6691	PACKING CASE	1	
1-6		VPN3521	PAD (A)	1	
1-7		VPN3522	PAD (B)	2	
1-8		VPN1791	CUSHION	4	
1-9		VQT5113	OPERATING INSTRUCTIONS	1	

Order No. VSD9310S228 (for NTSC)
VSD9310S682 (for PAL)
D1,D2

Service Manual

Supplement

PAL/NTSC Video Product

Subject: Change of Connector

Please use this supplement together with the Service Manual as follows:

Model No.	Bulletin No.	Order No.	Effective from
AG-7355-P/RP	19	VSD9110M212	Running Change
AG-7350-P	45	VSD9106M207	Running Change
AG-7150-P	44	VSD9106M207	Running Change
AG-7355-E/B	18	VSD9110M616	Running Change
AG-7350/7150-E/B	31	VSD9109M615	Running Change
AG-6730/6040-P	20	VSD9206M222	Running Change
AG-6760-P	13	VSD9210M227	Running Change
AG-6730-E	12	VSD9212M628	Running Change
AG-6040-E	11	VSD9209M625	Running Change

Board : REAR JACK & FRONT C.B.A.

Reason for Change

☐ The following part(s) has(have) been changed for serviceability improvement.
■ The following part(s) has(have) been changed for productivity improvement.
☐ The following part(s) has(have) been changed for standardization purpose.
☐ The following part(s) has(have) been changed for the safety regulation.
☐

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.	B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.	D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
P6901-03	VJP3152	VJP3503	CONNECTOR	3	A	AG-7350 SERIES
P6201-04	VJP3152	VJP3503	CONNECTOR	4	A	AG-7350 SERIES
P6601-03	VJP3152	VJP3503	CONNECTOR	3	A	AG-6730 SERIES
P4901-04	VJP3152	VJP3503	CONNECTOR	4	A	AG-6730 SERIES

Panasonic

Order No. VSD9310S680

Service Manual

Supplement

Video Product

Subject: Change of Variable Resistor

Please use this supplement together with the Service Manual as follows:

Model No.	Bulletin No.	Order No.	Effective from
AG-6730-E V00636	11	VSD9212M628	Running Change
AG-6040-E V00995 ✓	10	VSD9209M625	Running Change

Board :

Reason for Change

☐ The following part(s) has(have) been changed for serviceability improvement.
■ The following part(s) has(have) been changed for productivity improvement.
☐ The following part(s) has(have) been changed for standardization purpose.
☐ The following part(s) has(have) been changed for the safety regulation.
■ For automatic adjustment.
ENV32CA00B - - - (- type) → EVN49CA00B - - - (+ type)

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.	B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.	D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks

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Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
VR5001,5002	EVN32CA00B23	EVN49CA00B23	V.RESISTOR	2	A	HEAD AMP C.B.A. (AG-6730)
VR3001-04	EVN32CA00B13	EVN49CA00B13	V.RESISTOR	4	A	VIDEO 1 C.B.A. (AG-6730)
VR3005	EVN32CA00B52	EVN49CA00B52	V.RESISTOR	1	A	VIDEO 1 C.B.A. (AG-6730)
VR3007	EVN32CA00B54	EVN49CA00B54	V.RESISTOR	1	A	VIDEO 1 C.B.A. (AG-6730)
VR3008	EVN32CA00B24	EVN49CA00B24	V.RESISTOR	1	A	VIDEO 1 C.B.A. (AG-6730)
VR8001	EVN32CA00B23	EVN49CA00B23	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6730)
VR8002	EVN32CA00B24	EVN49CA00B24	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6730)
VR8003	EVN32CA00B52	EVN49CA00B52	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6730)
VR8004	EVN32CA00B13	EVN49CA00B13	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6730)
VR8005	EVN32CA00B14	EVN49CA00B14	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6730)
VR8001	EVN32CA00B23	EVN49CA00B23	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6040)
VR8002	EVN32CA00B14	EVN49CA00B14	V.RESISTOR	1	A	VIDEO 2 C.B.A. (AG-6040)
VR3501	EVN32CA00B24	EVN49CA00B24	V.RESISTOR	1	A	VIDEO 3 C.B.A. (AG-6730)
VR3502	EVN32CA00B52	EVN49CA00B52	V.RESISTOR	1	A	VIDEO 3 C.B.A. (AG-6730)
VR3503,3505, 3506	EVN32CA00B13	EVN49CA00B13	V.RESISTOR	3	A	VIDEO 3 C.B.A. (AG-6730)
VR3001,3004	EVN32CA00B52	EVN49CA00B52	V.RESISTOR	2	A	VIDEO 3 C.B.A. (AG-6040)
VR3002	EVN32CA00B54	EVN49CA00B54	V.RESISTOR	1	A	VIDEO 3 C.B.A. (AG-6040)
VR3006	EVN32CA00B13	EVN49CA00B13	V.RESISTOR	1	A	VIDEO 3 C.B.A. (AG-6040)
VR4001	EVN32CA00B14	EVN49CA00B14	V.RESISTOR	1	A	AUDIO C.B.A. (AG-6730)
VR4002	EVN32CA00B25	EVN49CA00B25	V.RESISTOR	1	A	AUDIO C.B.A. (AG-6730)

⚠WARNING
This service information is designed for experienced repair technicians only and is not designed for use by the general public.It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product.Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

Order No. VSD9410S696

Service Manual

Supplement

Video Product

Subject: Transistor Change

Please use this supplement together with the Service Manual as follows:

Model No.	Bulletin No.	Order No.	Effective from
AG-6730E	14	VSD9212M628	H4T - - -
AG-6040E	13	VSD9209M625 VDC[illegible]5	H4T - - -

Board : SERVO C.B.A.

In order to maintain sufficient hfe range, the transistor has been changed as follow.

Interchangeability Code (I/C)

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E	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
Q2904	MRN2404	MRN2402	TRANSISTOR-RESISTOR	1	B	

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Order No. VSD9505S205
D2

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject : Deletion of Screw

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-6040P	44	VSD9206M222	E5- - -
AG-6730P	45	VSD9206M222	E5- - -
AG-6760P	31	VSD9210M227	E5- - -
AG-6040E V00295	26	VSD9209M625	E5- - -
AG-6720E	28	VSD8908M623	E5- - -
AG-6045E	1	VSD9501M640	E5- - -

Reason for Change

- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ☐ The following part(s) has(have) been changed for productivity improvement.
- ■ The following part(s) has(have) been changed for standardization.
- ☐ The following part(s) has (have) been changed for the safety regulation.
- ☐

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
1-97	VHD0133	- - - - - - -	Deleted	0	E	

TE2-3127

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